Clinical Lectures
ON
CASES ILLUSTRATIVE OF THE
CURABILITY OF ATTACKS OF TUBERCULAR PERITONITIS AND ACUTE PHTHISIS (GALLOPING CONSUMPTION).

BY DR. McCALL ANDERSON,
PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW.

I.—TUBERCULAR PERITONITIS.

GENTLEMEN,—From a therapeutical point of view, we may divide diseases into three classes: (1) those which will terminate in recovery without any treatment at all; (2) those which, do what we will, are certain to terminate in death, and in the treatment of which we must content ourselves with palliative measures for the temporary relief of urgent and distressing symptoms; and (3) those which can be cured by a carefully regulated course of treatment.

The old system of treatment, with its bleedings and purgings and mercurialisations, and which probably is too universally tabooed at the present day, was a dangerous weapon; for although it saved some patients, it undoubtedly did harm, if it did not actually prove fatal, to others who might have recovered without it; and in any case it was a very unpleasant experience for the poor sufferers themselves. Hence the origin and spread of homœopathy, with its pretty little globules, which the merest tyro can dispense, which has the advantage of doing no harm in those innumerable cases which come under the first group, and which is little worse than the old system as regards the second, although it is utterly helpless as regards the third.

At the present day it is too much the fashion to decry the virtues of medicine; and it was with much surprise that I lately read the opening lecture of a distinguished surgeon, in which he stated that his students were to come to him not so much for the purpose of learning treatment as for the purpose of learning how to make a correct diagnosis; forgetful of the words of Broussais, who said: "The real physician is the one who cures; the observation which does not teach the art of healing is not that of a physician, it is that of a naturalist." Now I shall feel that I did not discharge the duty which I owe to you if I failed to bring prominently before you what I conceive to be the most correct principles of treatment, and if I made my wards mere schools for instruction in the diagnosis of disease. In pursuance of this object, I desire to bring under your notice illustrations of two diseases which are very generally regarded as almost incurable, but which sometimes respond to treatment in a most satisfactory manner.

The first case that I have to bring before you is that of the little girl, Helen G——, who is ten years of age, and who was admitted into bed 2 of ward 5 on Sept. 6th, 1875, complaining of swelling of the abdomen of three months' duration. Her family history presents no peculiarity, except that a brother died when young of "decline of the bowels." Her present illness began about three months prior to admission, with occasional pains in the epigastrium, to which by and by was added swelling of the abdomen; her appetite nevertheless continued fair, and her bowels regular. After the swelling had continued for about a month, a medical man was consulted, who ordered her removal to the country, where she remained about four weeks, her condition improving and the swelling fast disappearing under the use of "juniper drops." A month before her admission, however, the swelling reappeared; but her mother thinks that, to some extent, it has "been kept under" by the use of cream of tartar. She has never had much cough, but her urine has frequently thrown down a reddish-yellow precipitate, and has been lately rather deficient in quantity.

On examination, we found that there was only slight fever, the temperature being usually from 99° to 100°; but there was decided perversion of the pulse-respiration ratio, the pulse being 104° (of fair strength) and the respiration 36 per minute. She was not much emaciated; her tongue was slightly furred, her appetite fair, her bowels inclined to be loose, and she complained a great deal of pain and tenderness of the abdomen. There was distinct evidence of fluid in the peritoneal cavity, and that in considerable quantity, as, when she lay upon her back, the lateral dulness on percussion extended as far forwards as a line drawn down from each nipple, while below it began at the junction of the middle with the lower third of the abdomen. The circumference at the umbilicus was twenty-six inches.

Now what has been the cause of the ascites? Manifestly not disease of the kidneys or heart, for both these organs are healthy; nor disease of the lungs, for although, as we shall see presently, these are not healthy, the condition is not such as to be likely to produce dropsy, and because dropsy dependent upon disease of any of these organs commences in the subcutaneous cellular tissue, and only secondarily involves the serous cavities. The accumulation of fluid must therefore be due to an abdominal cause, and then, generally, it arises in consequence of obstruction to the portal circulation. But in this case there is no evidence whatever of disease of the liver or of other abdominal source of portal obstruction; and thus, by a process of exclusion, we arrive at the opinion that it probably results from inflammation of the peritoneum. Further, we are justified in suspecting that the inflammation is of a tubercular nature (although, in the majority of cases, this condition gives rise to adhesive inflammation with matting together of the abdominal contents, and not to fluid effusion), and for these reasons:—1st. The patient's brother died of "decline of the bowels." 2nd. She is only ten years of age—a time of life when tubercle of the peritoneum is common. 3rd. She had a slight dry cough; there was dulness on percussion at the left apex, and in the same situation there was "wavy" respiration with an occasional snoring râle—that is to say, she had tubercular disease of the lung (using the term "tubercular" in its widest sense).

Our diagnosis, then, was "tubercular peritonitis with effusion." Our treatment, as you saw, consisted at first in a careful regulation of the diet and of the bowels; to this was added, on Sept 15th, Savory and Moore's pancreatic emulsion, in doses of from half a drachm to two drachms, in milk, an hour after the two principal meals; and on Sept. 21st half a drachm of syrup of iodide of iron three times a day, before food. On Oct. 19th it was noted that her general state was tolerably satisfactory, but although the local symptoms had not become aggravated, it could not be said that there was any decided amendment, and the abdomen still measured twenty-six inches. Accordingly, to the previous treatment was superadded cod-liver oil in doses of a drachm, gradually increased to half an ounce, three times a day. Fifteen days thereafter (on Nov. 4th) the abdomen measured twenty-four inches, and on the 16th twenty-three inches, by which time all pain had disappeared, and not a trace of fluid could be discovered in the peritoneal cavity, even when the patient rested upon her elbows and knees, an attitude in which a very trifling quantity of fluid can be detected. Towards the end of the month she was dismissed well, although there was still slight dulness at the apex of the left lung, and she was warned to persevere steadily with the treatment which has just been indicated.

If we were to be guided by the opinion of the profession generally, and even by the writings of our best authorities, we should have to take a very gloomy view of such cases. Thus, Sir Thos. Watson says: "These are very unpromising forms of disease, and it is seldom that we can do more than mitigate the most distressing of the symptoms, or retard, perhaps, the march of the disorder." And, again: "Do what we may, in nine cases out of ten our best-directed efforts will be disappointed.[1] I am far from denying that in a certain proportion of them the disease will terminate in death, do what we will; but I would have you enter upon their treatment with a hope that your efforts may be crowned with success, especially where the inflammation is accompanied by fluid effusion. The case which I have just narrated is by no means a solitary one in my experience. I am at present seeing a lad, twelve years of age, who is just convalescent from a most violent attack of tubercular peritonitis, of

[1] The Principles and Practice of Physic, by Sir Thomas Watson, Bart., M.D. Fifth edition. Vol. ii., p. 418. London: Longmans, Green, and Co. 1871.

which I may perhaps give you full details on some other occasion. Suffice it to say, in the mean time, that he is a member of one of the most scrofulous families I have ever encountered. His father is dying of scrofulous disease of the glands of the neck; his mother had pleurisy last year, and now is phthisical; two of his brothers are at present abroad on account of phthisis; and a brother died of tubercular disease of the bowels. His illness commenced on the 1st January with fever and pain in the hypogastric region; was accompanied by high temperature, great emaciation, diarrhœa, occasional vomiting, but without serous effusion into the peritoneal cavity; and during the progress of the attack, which lasted about five weeks in all, a large abscess formed in the neck, and discharged about a cupful of pus. He was assiduously nursed, and fed and stimulated; had iced clothes applied to the abdomen for half an hour every second hour—a method of treatment of which I shall have more to say in my lecture on the treatment of galloping consumption; and opium was administered in full doses (a quarter to a half grain every four hours), with a grain of quinine in each dose. His case appeared, as the disease advanced, an almost hopeless one; and yet he is now sitting up in his arm-chair cheerful and well, although of course still weak and thin. And I call to recollection the case of a little girl who was treated by me in the Royal Infirmary a couple of years ago. Her symptoms were very similar to those of the first patient, including the presence of fluid in the peritoneal cavity and consolidation of one apex. She was treated with cod-liver oil and syrup of the iodide of iron, and she was tapped twice, a large quantity of fluid being removed on each occasion, which a microscopical examination showed to be inflammatory exudation. This girl made a perfect recovery.

But some may say, I do not believe that tuberculous peritonitis can be recovered from, and in these cases there must have been an error of diagnosis. In answer to this it is sufficient to refer to a case reported by Spencer Wells in his work on Diseases of the Ovaries.[2] This was the case of a young lady, aged twenty-two, who had an enlargement of the abdomen which it was supposed might be due to "a thin non-adherent unilocular ovarian cyst." Accordingly a small incision was made below the umbilicus and the peritoneum opened. "A large quantity of opalescent fluid escaped, and then the whole of the peritoneum was seen to be studded with myriads of tubercles. Some coils of small intestine were floating, but the great mass was bound down with the colon and omentum, all nodulated by tubercle, towards the back and upper part of the abdomen. The uterus and ovaries were felt to be of the normal size, but their peritoneal coat was very rough." This patient made a good recovery, and has since married, and her case not only illustrates the fact that tubercular peritonitis may be recovered from, but also, as in my last case, that the removal of the effused fluid may contribute to that result.

THE BIOLOGIST AND THE PHYSICIAN.

Being an Abstract of the Annual Oration before the Hunterian Society for 1877.

By W. MOXON, M.D., F.R.C.P.,

PHYSICIAN TO, AND LECTURER ON MATERIA MEDICA AND THERAPEUTICS AT, GUY'S HOSPITAL.

AFTER briefly alluding to the object of the oration—the commemoration of the life and character of John Hunter,—the orator discussed at some length the opinion of Mill and some other logicians that it is almost if not quite impossible to complete the knowledge of living nature and of human nature by the inductive methods which Bacon announced and urged, which Hunter at length pursued, and which the medical profession is now following; and showed that Hunter had made real what logicians have declared impossible.

Dr. Moxon continued: — Mill proves, in cold formality, that by experiment and observation you cannot discern the laws of living nature. Hunter, warm with ardour in his noble pursuit, discovered law after law of living nature, and was one of the first to make possible that knowledge of living nature which is a very worthy pride of our very proud generation. Hunter showed a most fertile imagination. Did a fact come before him, forthwith arose vivid suggestions, which he pursued ardently. Hunter's mind was fruitful of hypotheses and analogies: they came freely; and his great excellence lay in the truthfulness and industry with which he verified or directed them. He directly repudiated the looking for principles by studying facts. With him facts were to establish principles—principles whose rise constituted the power and life of his mind. He was not the biologist who, even if he found it among facts, would accept an apes-universe. A universe without a leading principle like to the power and life of his mind was a thing he refused to recognise. Whatever we may say of the crudity of his belief in a vital principle, if you study his works, you will, I believe, find that belief to have been no mere accidental ingredient in a mind otherwise comparable to that of the biologists who construct a universe out of fragmentary facts. If you take away from him his faith in a vital principle, you undo him. That belief animates and is the soul and faith of him—no mere chance ingredient. Without it his genius is reduced to mere instinct. He would be the first to rise against such a rendering of the source of his power. His was the true poet's imagination—fertile not in freaks of morbid fancy couched in verses full of "fume" and "spume" on some revolting theme of lust, or rage, or despair, like some fashionable poets of a modern school. He was greater even than the true poet whose works mirror nature truthfully. He was a poet whose rich imagination thrilled to accompany the secret harmonies of nature's design. Such men make almost tangible that great poetic power whom, seeing in his works, we ignorantly worship. Like a true poet, he rose from truth to truth by keenly seeing analogies between known and unknown; yet, like a man of sense and science, he held always to an answerable question, and in its solution showed grandly that intellect which Carlyle says "sees the essential point and leaves all the rest as surplusage."

Hunter did not see Nature in a servile spirit. He went to her to practise his active intelligence, not to bring facts like a cart-horse brings dust, nor to heap his memory with scientific details until it became the arcana of science. Loving nature as he did, hear how he speaks of facts. He says: "In Europe philosophers reason from principles, and thus account for facts before they arise. Too much attention cannot be paid to facts, yet too many facts crowd the memory without advantage, any further than they lead us to establish principles." Really, I wish modern authorities in medical education would see that as clearly; but more of that presently.

Here is no mere matter-of-fact individual on a larger scale than usual; no heaper-up of a bigger dust-heap than other people's. True, no one ever brought together so many facts. Everyone should see the Hunterian collection, and remember Hunter's busy life, that he may think shame of such a little as we allow our own lives to concentrate themselves upon. But if he worked patiently at facts, it was not like us young aspirants of the Pathological Society, who hand up our specimens of happy surprises in a glow of wonder that such a thing should happen, and of pride that it should happen even unto us. Not so did Hunter collect facts. He always followed principles in his work; and herein is the peculiarity of that wonderful Hunterian Collection, which fully entitles it to the charge of that separate commission under the Crown who have care of it.

Hunter's mind was creative in the highest degree, and his energy of inquiry was of lifelong endurance. Ah! how the little experimenters miss his genius who work in a spasm of acute inquiry of two hours and a half to twenty-four hours' duration, to find a secret which Hunter would have given his lifetime to reach.

Hunter did not sacrifice dogs to foolish inquiries, which with all the pain and trouble could not thereby be answered. And if we ask what gave him that most valuable power of estimating what was worth doing, and what could be done, the power which Bacon calls the "mathematics of the

[2] J. & A. Churchill, London, 1872, p. 135.

mind," we find the reply, I believe, in these great facts of his history. Firstly, that he was a man who had a free youth, not over-taught, nor over-strained; and, secondly, that in his manhood he worked with an eye to usefulness and duty, and not only to notoriety, nor to the mere cry of "who will show us something new." Indeed, the main and distinctive feature of his noble life was his resolute pursuit of the practical aim of his profession to establish sound laws for scientific surgery and medicine. I have said that the wonderful store of facts he collected constituted answers to questions. Hunter the physiologist, answering the questions of Hunter the surgeon, he did not so follow physiology as to turn it away from usefulness. With a mind set on discovering the nature of the heat of inflammation he studies for years, and would set Jenner studying, the temperature of bats and hedgehogs at times when these creatures are starving and asleep. He watches and dissects hibernating bees with the same purpose, taking note of the amount of fat within the insect's body: nothing too minute or too laborious, where his desire is to examine and establish a principle in surgery. To throw light on the redness and active pulse of inflammation, he causes artificial inflammations, and injects the widened vessels, and he watches for and finds the effects of rigor mortis in the arteries. And the results of his work he puts up in his museum. And he will gladly have anything for his collection. *But always putting things by in their physiological order*, mark! so that in due time they shall answer to his further questions. He will lecture on surgical principles,—true ones they must be, if he changes them yearly in accordance with his observations. But he will not, *he* cannot lecture on comparative anatomy or zoology. Why not? It does not conform enough with his main bent to surgery, to a practical aim, to a duty. He believes in a vital principle, therefore he must have an aim before him. He succeeds in his aim, and by the masterly introduction of the operation on aneurism which bears his name he saves thousands from a painful death. Led further by the same enthusiasm for the true purpose of his life as a surgeon, he inoculates his own frame with a loathsome disease that he may have it always by him to study it, regardless of danger and of pain.

It is true that in the course of his life of observation and experiment Hunter attained to a large zoological knowledge. He sought that knowledge that he might apply it in the service of surgery. But I gather from the accounts of Hunter, from his letters, from his museum, that the life's aim and meaning of Hunter was duty and not mere knowledge. His was the nobly useful and controlled enthusiasm of the knower for duty's sake, not the vague enthusiasm of the knower for knowing's sake, which may end in making a man of large natural intelligence find the extreme of his glory in the completest possible knowledge of the common frog. Such a spirit as this was strange to Hunter. I doubt if he would understand a man whose life was settled on mere zoological biology.

Even when the knowledge of human nature takes the form of zoological biology, and is made a profession of, I know no reason to think slightingly of it, other than that all professions of mere amusement are more or less one-sided affairs. Hunter's life was so devoted to usefulness, that I think the professional zoologist would have been a mystery to him. But he was spared the question. The zoological biologist is a new species. In Hunter's days that proudly Darwinian development had not struggled into existence. If you observe the zoological biologist, you see he does not belong to Hunter's species; he is distinguished from it by not possessing the aim to be useful. Neither does he belong to that gentle species—the author of the beloved natural history book of my boyhood. For that gentle author was very humble and reverent towards the mystery of life and its authorship, and he addressed the youthful reader very kindly. But the zoological biologist is not very humble or reverent. In fact, he shows very openly a sad *penchant* for doubtful theology, and he comes down upon the pupil like a pedagogue. Hunter classified the specimens he collected from the structures of living creatures in classes, according to those organs of the human frame which he studied to relieve their disorders. The zoological biologist collects specimens, but he classifies the animals in a chain leading downwards, and he preaches certain conclusions. Mr. Hunter was a strenuous believer in, and combatant for, the vital principle, as are all good men and true who have their faces forwards, and who do not fall into the absolutely unproven guess of the correlation and conservation of vital with physical "forces," a view which dwindles down the study of life to a correlation and conservation of its physical details in museums of biology, to the neglect of its vital principles.

It is very true that to know and to think all you can, to widen the knowledge of fact-truth, is in its way commendable. My point is clear. I claim for Hunter that, great anatomist as he was, he was saved from mere doctrinaire tendencies by his noble aim. But the successors of that Hunter who taught physiology in aid of professional knowledge, have handed over physiology to the special biologist, to be taught rather in competition with than in aid of professional knowledge. The rise of the species biologist—who knows nature like the boys know birds' eggs, for the sake of knowing, and is nobly superior to mere utility, nobly useless—has brought a problem of increasing importance into the question, and chiefly of medical education. The new species influences us in several serious ways. Thus:—1. In that enthusiasm which would find it the highest glory to know perfectly the common frog, he pursues facts without due regard to their utility or principle, and thus the science of physiology is fast becoming very like that Chinese philosophy of facts which Hunter indicated. 2. As he knows for knowing's sake, unburdened by duty, he does not estimate the smallness of the time the student for duty has to devote to inapplicable fact-heaps; and presses for more of that student's time, already too small, in which the student has to learn his professional duties. 3. The *aim* of his system of knowledge not being towards utility, there is a neglect in enforcing the useful bearing of that comparatively small part of the fact-heaps which applies to the student's ultimate professional services. Meantime, the trainers of the student for professional duty having given up physiology to the professed biologist, the bright influence which Hunter brought to bear direct from his physiological knowledge to his surgical enthusiasm is lost to the student. In short, physiology is made too large and too loose for the student's grasp, and has not its chief bearing in the direction of his future service.

The main point I want to urge is that our youth need to be taught more by the professional worker if less by the professional knower. I believe that if the right kind of nature knowledge—such as bears on the great questions involved in his life's duty, such as is carried in the mind and used by those who themselves discharge the same life's duty—were imparted to the student along with, and in the course of, his practical training there would be far more of earnest work in fruitful departments of physiological knowledge. Clinical chemistry would be advanced. The descriptive characters of disease would grow into a true science. The diseases to be recognised and the art of recognising would be more sure, and the true purpose of the profession would be furthered; even if the more fruitless departments of biological lore might progress less in that futile way, which tends to make their chief professor's main apparent aim to become a doctor of doubtful theology.

What Hunter's life shows is that the value and power of a man does not consist in what he knows, but in how he knows it, and whether he can use it. Hunter's was a character quite distinct from the professional knower. In studying his life some great fallacies, such as spoil many lives, may happily be exploded. In him you see that it was not his knowledge, vast as that was, which constituted his power. And we, of this generation, who seem to commit ourselves deeper and deeper to the fallacy of confusing knowledge with mental power, may well consider the life of Hunter. Knowledge may be a token or even a proof, as it is an instrument, of power, but it is quite false to regard it as a *cause* of power. When a river flows through a fertile valley, the geography books commonly say that valley is watered by the river, as if they looked on the river as the cause of the watering of the valley. But, in truth, what seems to water, only drains; once in the river, the water is away to the ocean, and waters not the thirsty land, but the sea that is wet enough already. The river is the drainage, not the water-supply—the effect, not the cause. Now it is just the same with the knowledge of biology in such a mind as Hunter's. There flows the knowledge visible enough in his fertile mind, but whoever is concerned in raising the like fertility in another mind must rightly know the source and

spring whence that knowledge came, and not only the mere body of learning. He who would make a Hunterian mind by cramming a young man with biology is very like one who, hearing that a river watered a fertile valley, should, to fertilise another valley, dig a long trench, and fill it with water. But, in fact, it was not the possession of the knowledge that made Hunter's mind great and fertile. It was the continual desire and getting of the knowledge for use, so that it was a living stream, and not a stagnant pool. For as the river flows and endures by reason of the water the uplands have attracted to themselves, so the stream of knowledge in a human mind, to be useful, must come down from activities of thought which demanded and drew down a supply of principles to the dry dust. For instance, to the Chinese dry-dust fact-heap of modern biology.

The great fallacy of the age is the vulgar fallacy that knowledge is power. But not all knowledge is power; only the knowledge you have faith and aim to use is power, and the instinct of each mind is, I believe, a far better judge of how much knowledge it has faith and aim to use than we commonly suppose. Knowledge is not power. Any fourth-year's student knows much that Hunter did not, and could not, know. But where is the power of Hunter? Power arises by *training in the use* of knowledge. Consider the difference between training and teaching. The *teacher* tarries over the things he knows, and fixes them in the learner's memory; the *trainer* takes what is in the memory, and converts it into an organ for the pupil's own use. The store of memory of things taught is totally distinct and separate from the trained mechanism for use of knowledge. And these two different things—the store and the mechanism—are in separate places in the brain. It is only of late years we can be sure of this. We have it proved obviously in the case of language in what is called aphasia. In aphasia, a person paralysed on the right side of his body has lost the power of using language, and yet understands all you say. Obviously, then, the understanding of speech is in one place and the power of framing language is in another place in the brain. The same is true throughout all human acquirements. The power of knowing is the fruit of knowing, and the power of acting is the fruit of acting. There is knowledge stored in one place, and the power of using it is stored in another place. *Teaching* is the storing of knowledge; it may be done quickly. *Training* is the creation of an organ for use of knowledge; it needs much time; it is a slow process. The trainer has to convert the pupil's knowledge into motive, his desire into patience, his will into skill. Every good trainer aims to raise up in the pupil's mind a self-training faculty which shall itself continue to train more and more knowledge into motive. By such training knowledge becomes power; but knowledge, as given by the mere *teacher* into the memory, is not power; it is so much weight, which by training may become the instrument of power.

Now the self-training spirit is natural to some men—to all great men. On the other hand, the self-training spirit is almost absent in some men. These are the fools, and trouble everyone as to what is to be done with them. But the vast majority of men have some self-training faculty, and the proper aim of education is to support this, which I may call the vital spark of character, by help from the training faculties of others.

I must ask of your justice to notice that in all this nothing is said against science. I only claim that the right teaching be given at the right time, so that each student may have a chance of being trained adequately in the practice of recognising the kinds and varieties of diseases and accidents, and learning to use the means of relief. Give him nature-knowledge in such a manner as will serve in establishing principles for his practice, but don't lead him hurriedly all afield into professional biology. If you teach him rightly as much nature-knowledge as he has fairly time to know well, he will not forsake the pursuit of more in the earlier and less occupied years of his practice. He is all the more likely to seek to know more when he has the satisfaction of knowing well, and feeling the use of what he knows; whereas a smattering omniscience raises vanity and takes off the freshness from inquiry. But now, by publishing the pass-lists of the schools, a pressure is put upon every school, compelling it to devote itself more and more to the teaching of fact-heaps, because fact-heaps show in examinations and training cannot obtain credit in examinations. Thus we often see men who are naturally devoted to professional duty, and who have been constant in the wards, we see such men snubbed or plucked, whilst a quick learner of fact-heaps passes with *éclat*. But I do not speak against science, rather confiding in her natural attractions, and believing that although by teaching science you do not train, yet by good training in pathology and medicine you raise a desire for more and more knowledge of the laws of life, as bearing on the human organism, at least in all those who are capable of anything above mere routine, and who could be benefited at all by any science in excess of the least they can get a living with, teach it how and when you will. But to teach every student to recognise rightly every disease, and to have promptly ready a proper management, such is the proper aim of medical education. And matters of knowledge that do not help men to recognise and to meet disease should have a moderated proportion to the training in use of matters that do help to recognise and meet disease.

And to thus train a pupil through the forms of all diseases requires a very long time, whereas his trainer is allowed a few months. Yet the pupil has been two years or more in the hands of the biologist learning aimlessness. But I find a few months of little use in training a pupil. If you only had to *teach* him it would be little, but in order to train men you have to know something of their nature. For you have, as I said, to convert, and train them to convert, their knowledge into motive, their desire into practice, and their will into skill; and in a few months you have hardly found out what sort of a man you are dealing with, and much experience hardly enables you to know your man. For not only are all natures not alike for training purposes, so that some need training one way and some another, but you find that equal points of character in different minds are of variable value as leading features. A character or power is constant and trustworthy in one kind of pupil, yet that same character or power becomes inconsistent and variable in another kind of pupil. In short, one kind of men are best trained with due regard to the imagination, yet another kind of men require to be trained through the reasoning faculty; but meantime no experience will save you from the necessity of knowing each one if you are to train him well, for unless you know a man you may be hanging the knowledge on a point of his mind whose activity he least enjoys, and naturally least encourages.

Now, besides the truth that the biologist takes up relatively too much time, and leaves not time enough to the practical physician, there is another aspect of this important question, and that is that the biologist and the physician work in opposite directions, if upon the same lines. And it is very curious to me that no one notices this leading truth. The biologist, if he shows any aim at all, stretches himself out to learn the first beginnings of life, and its smallest minutiæ. Now, the task of the physician is in quite another direction. The biologist's question is always driving at the origin of life, but the physician is concerned with the wear and tear which comes by mechanics. Preventing wear and tear by soothing and supporting is nineteen-twentieths of the function of the physician, and wear and tear has to do with severity of use and not with history of development. Supposing that by a chain of argument, to which Schleiden, Remak, Virchow, and Darwin each contributes a link, I prove that the tubercle cell is a direct descendant of the ovule of the original gorilla. In what does that at all tend to help me cure tubercle? To the physician the cause of disease is the preventable cause; but so ignorant are we of the law of development that to find a disease includes development of cells, tends to render it mysterious and place it beyond our reach, and to make us so far powerless in prevention. That side belongs to the biologist; the practitioner has to consider the shocks and injuries that are the preventable causes of disease. The point I urge is that there is a certain neglect of training and of the aim of training in completing the course of medical study. Our modern tendency is to spend the larger part of a man's time in teaching him professional biology, and there is growing up a generation of physicians, through the long prevalence of that system, who are so imbued with the scientific spirit as absolutely to forget, in the highest issues, that their profession has any practical aim. How else can we explain this fact, that at the highest examination for the degree of M.D. at the University of

London, not three years ago, the case set before the candidates for commentary to test their power of knowing disease when they meet it, and of treating disease, was the case of a man who died without the physicians having been able to make out his disease at all? Now, it is evident that whether the poor man had the symptoms which would have revealed his disease, or whether he had not those symptoms, his case could not have been a fit test of skill in recognising disease, let alone treating it. For if the symptoms of the disease were present, they were not noticed, so that the observation failed. But if the symptoms were absent, why choose such a case, and set an impossibility before the candidates? At Cambridge, for the Wranglership, they don't set problems that they cannot answer themselves. And if you reply that the examiners wanted to try how much the candidates could produce of learning, that is just my point. It shows that the examiners called for scientific information towards an end which they could not achieve themselves, as if the learning were everything and the end nothing. Now, these examiners were such able men that I can see no explanation of the proceedings, except that they were so scientific that they only thought of an intellectual puzzle, and were so afraid of not making that puzzle worthy of their clever candidates that they made it quite insoluble. But that was letting go the practical aim of the profession, and I mention it because it is a sign of the times.

I mention these signs of the times in no spirit of mockery; very humbly I feel no desire to look around for your approval. I have an earnest belief that Hunter's profession needs to recall Hunter's spirit, and once more, instead of wandering in professional biology, and proceeding as if nature-knowledge were their ultimate aim, pass through and take such a knowledge of nature as is helpful, always in a spirit of self-control, and always keeping their great purpose in view.

We want less of such biology as takes all purpose out of the universe, and aims at professing a theology of high apes. We have a right to resist, as physicians, the drag upon our profession of workers in such an aim. But Hunter's back was towards all apes and his face to the future; because he did not make futile biology, but took pains to bring in the knowledge of nature to the help of man. Infinitely energetic as he was, his energy was towards utility. Modestly he claims your remembrance as a true utilitarian. If any skeleton should be of use to fix the standard of human greatness, he would secure it at all cost in the Irish giant, whom he accordingly followed with triumphant tenacity of purpose. He did not do as the great author of the utilitarian philosophy, whose fleshless bones, clothed in a coat, were, by his will, to sit at the meetings of his followers, to give the greatest pleasure to the greatest number of Benthamites. Hunter showed no unworthy touch of self, either past self or future self. And what was it that kept him so pure, so that he was not like the speculative leaders in biology who pursue their subject regardless of the aims which kept him simple, until their subject, however elaborate, becomes as debased in its departure from function, as it is florid in profusion of minutiæ? It was this: the maintenance and steady following of his aim as a surgeon. That kept his mind from wandering into vain-questioning biology. Which wandering I hold must be judged twice, and not passed off-hand into the light of the glory that surrounds Galileo, and Newton, and Dalton, and other great philosophers who pursued knowledge for the sake of the knowing, or at least with no evident direct aim towards utility. For those philosophers offered truths which enhanced the sense of personal dignity in the learner's mind. Nothing in their discoveries tended to spoil the knowing thing for the sake of the knowledge acquired. You may know the laws of light without disturbing your own light. But in vain do we overlook the truth that a new element is necessarily introduced when the pursuit of the knowledge touches inquiries that are charged with inferences as to individuality and its destination. Such knowledge plays on other parts of the learner's mind besides his knowing faculty. So it is only fair that time and circumstance be considered in such learning. However unfashionable and unpopular it may sound, and however unworthy of an age which, in the false faith that knowledge is power, will have the tree of knowledge up to examine its roots lest anything should remain unknown, I believe it should be said and held that when any facts are raised into opinions which tend to greatly change the learner's views of his own individuality, the question is not simply one of knowledge, and of the glory of discovery; lest theorists should go farther than they have gone, and hasten to raise incomplete fact-truths into unworthy and debasing general belief. For all human history has shown that those who hold general beliefs which animate individuals with a sense of personal worth, surely displace in the human struggle for existence those who hold general beliefs which debase and demean their individuality. So that if in his wanderings the biologist touches by necessary inference the value of individuality in his average fellows, the question of the worthiness of such biology is more complicated than any question in regard of mere knowledge, because it affects the knowing faculty. And if experience should show that it harms that faculty, the glory of biological knowledge may come, perhaps, more under the analogies of the laws that make men cover some fact-truths of their frames with due clothing. And should it prove that a training in exalted views of their individuality is essential in the average members of a strong community, overmuch display of speculative biology may ultimately come to be regarded as an exposure, and not gloried over, lest the young and inexperienced learn to think meanly of the house into which they were born, and, knowing no better, believe their mean view to be secure in the sacred name of truth; whereas at best it is but a phase in the speculative struggle over the half-sacred name of general truth. I say advisedly the half-sacred name of general truth. For no complete answer all these 1877 years has been given to the question "What is truth?" and until we know the answer, how can we tell but that there may be something required to make human views of general truth completely sacred. And thus it may prove that Hunter's dealing with nature-knowledge was right when he instinctively perceived that the true sanction of biology is utility, and its proper method the study of function within the circle of the completest individual life.

ON

CHEYNE-STOKES' RESPIRATION IN CEREBRAL HÆMORRHAGE.

BY W. H. BROADBENT, M.D.,

PHYSICIAN TO ST. MARY'S HOSPITAL.

THE article in THE LANCET of Feb. 17th on the Cheyne-Stokes' Respiration creates an opportunity for putting on record the following case, and at the same time renders unnecessary the execution of an intention I had formed of giving, in a communication to one of the Societies, a *résumé* of the views put forward as to its causation.

A gentleman aged about sixty-four, tall, decidedly but not extremely stout, with good colour in his face but scarcely florid, has been under my observation from time to time for four or five years. Several members of his family have died, at about the age of sixty, of apoplexy; and he has himself had two slight and transient attacks of partial hemiplegia, which have left no traces of paralysis. His mental power had suffered no obvious impairment, and he had continued to transact much arduous and important business; but he had become more emotional. He had also had very slight attacks of gout. When I first saw him he presented all the signs, arterial and cardiac, of very high arterial tension. The pulse was long and hard; the radial artery could be followed up the forearm for some distance, and could be rolled under the fingers in the intervals between the beats of the pulse; the aortic second sound was markedly accentuated and voluminous. These indications were greatly modified by treatment, and in the early part of October, 1876, the patient was remarkably well; he was, however, liable to flush after food, and inclined to sleep; and the urine, though of good colour, had a specific gravity of only 1012 to 1015; it did not contain albumen.

On Dec. 1st, 1876, he came up to town on business, and on the morning of the 2nd had an exciting interview; while at dinner on this day, which in accordance with my advice

was a mid-day meal, and having eaten beef-steak and drunk two glasses of claret with water, it was observed that he looked confused, then his right hand dropped, and a few minutes later speech was completely lost. This was at 2.30 P.M., and I saw him at 3.30, at which time there was well-marked right hemiplegia. The paralysis was complete in the arm, almost equally so in the leg, very decided in the face and tongue; there was a slight tendency to conjugate deviation of the head and eyes to the left, but not sufficient to resist voluntary efforts to look to the right. There was no appreciable impairment of sensibility, and there had not been even momentary loss of consciousness. One slight effort to vomit had been observed. The patient was quite speechless, not from embarrassment of articulation, but distinctly from aphasia, properly speaking. The pulse was 84, regular and compressible; the heart's action rather weak; temperature 97·6°. (His usual temperature was subnormal, so that this low temperature had no particular significance.)

My attention was at once attracted by the breathing, in which the "Cheyne-Stokes" variation was well-marked. I was unable at this visit to "time" it in consequence of the attention required by the condition of the patient, but I felt the pulse, and listened to the heart through several entire periods of breathing and suspension, and was unable to detect the slightest variation either in rate, regularity, or force of pulse, or in intensity or character of the sounds of the heart. I noted, however, that towards the end of the respiratory pause there were almost always fidgety movements of the left leg. The patient also yawned frequently.

Leeches were applied to the left temple and behind the left ear, hot bottles were placed about the feet and legs, and a calomel purge was given. In ten or fifteen minutes speech began to return; he could say "yes" and "no," but very little more.

At 6 P.M. the pulse was 84, rather stronger than before; temperature 97·8°; respiration exactly as when I had left him. The urine had been passed very frequently; it was of normal colour, had a sp. gr. of only 1011, contained no albumen. He could now answer questions briefly, but was still frequently at a loss for words, and incapable of producing a moderately long phrase; he could also move the right leg slightly. My visit gave rise to a burst of weeping, but this was not uncommon.

At 10 P.M. the patient was better; pulse 90; temperature 98·4°, and I had now leisure to observe the breathing more carefully. The pause lasted from fifteen to twenty seconds, during which time there was not the least movement of chest or abdomen. The breathing then began in shallow and gentle inspirations and expirations, and gradually rose to a sort of climax, when the movements of the chest were free and forcible and the entry and exit of air at the nostrils or mouth noisy. There was then a gradual subsidence, and eventually a complete arrest in from thirty to thirty-five seconds. This cycle of breathing and pause was maintained with great regularity, the breathing going on for thirty or thirty-five seconds, the cessation lasting fifteen or twenty seconds. It was scarcely at all disturbed by conversation, but was at times interrupted by yawns. Unfortunately, it was not noted at what period yawning most commonly occurred. The slight movement of the left leg at the end of the pause was still observed. As at first, the most careful observation of the pulse and heart failed to detect the least variation, either during the respiration or when it was suspended.

Next day the respiration presented the same cycle, and I had the opportunity of watching it uninfluenced by the act of eating. The movements and pause occupied about the same time as on the previous day, and I feared lest the current of air when the breathing was at its height might carry some particle of food into the larynx. In the evening again, with the pulse at 96, and manifesting decided tension, and the face flushed, there was no noteworthy difference in the breathing.

On the 4th the periodical suspension and exaggeration of the respiratory movements were much less marked, and ceased to be observed during conversation. From this time the case presented nothing worthy of special note except perhaps that the right arm, though quite paralysed, always moved during the act of yawning. The aphasia completely disappeared in a few days; the leg rapidly regained some degree of power, and the patient was able to leave town within three weeks of the attack. The arm, however, remains paralysed.

As regards the lesion in the brain, the facts of this case are very simple, and almost as certain as if an examination had been made. There was hæmorrhage to a considerable amount outside the extraventricular corpus striatum, near its anterior end, between this ganglion and the external capsule (which underlies the convolutions of the island of Reil), extending upwards sufficiently far to tear fibres of the corona radiata or internal capsule. This lesion must have played an important part in giving rise to the respiratory disturbance, since the cyclical variation had not been observed before, and gradually ceased after forty-eight hours. An interesting question which arises is whether there was any contributory cause in the condition of the heart and aorta. I had frequently had occasion to examine the heart, and had recognised the existence of a moderate degree of hypertrophy with dilatation, the apex being displaced downwards, the impulse powerful, and the first sound slightly modified. The aorta also was dilated, as was shown by the loud accentuation and voluminous character of the second sound over the vessel and in the neck. These changes in the heart and aorta were attributable to long-continued arterio-capillary resistance to the circulation and arterial tension. There was no valvular lesion. It was possible that a heart in this condition might be undergoing fatty degeneration, and a careful examination was made repeatedly, with a view of ascertaining if possible whether such was the case. The impulse was still good, and the first sound preserved much of its normal character; the pulse also was strong, and the arterial tension at times high when the bowels were not duly relieved. These signs, I think, negative the existence of advanced fatty degeneration, though there was a well-characterised arcus senilis in the cornea.

In the article in THE LANCET doubt is thrown on Von Dusch's statement that he has observed the Cheyne-Stokes' respiration in various forms of cerebral disease and in uræmic coma, but I can confirm his observations. I have seen it in several cases of apoplexy, but it bears no relation as a symptom, either to the seat or severity of the lesion. It is often altogether absent in cases which prove fatal, and may be present in others in which the injury is not very great. It was noticeable two days after the attack in a case of slight hemiplegia seen recently with Mr. Malcolm Morris, of Highbury, and had been very well marked, so as to have been a source of apprehension. A more interesting observation was one made in a case seen with Mr. Musgrave, of St. John's-wood, in March, 1876. The patient, an elderly gentleman, had been suddenly seized with apoplexy, and was lying on his back unconscious, breathing stertorously, the face deeply flushed, the pulse oppressed and long. There was no evidence of hemiplegia, no disease of kidneys. He was turned well over on his left side, and the stertor at once ceased, as was anticipated, but an unexpected result was that the noisy and obstructed, but regular, breathing was replaced by the Cheyne-Stokes' alternation of pause and deep respiration. I do not know how long this continued. The patient recovered consciousness after an enema of quinine, strong coffee, and brandy, but died in a second fit two days later.

In uræmic coma I have also observed the Cheyne-Stokes' respiration on several occasions. The late Dr. Sibson had a case of kidney disease with uræmic symptoms under his care when I was his resident medical officer, in which this phenomenon was present for many days, the patient ultimately recovering and living for two or three years. As might be expected, the most careful notes were taken recording the duration of the pause, the frequency and varying extent of respiratory movements through the period of breathing and the state of the pulse at all the points of the cycle. The last time I saw Dr. Sibson in St. Mary's Hospital, a few months before his death, this case was the subject of conversation between us, suggested by my calling his attention to a patient of mine in uræmic coma who was breathing in this way.

I am not prepared to say whether in all the examples of the Cheyne-Stokes' respiration in uræmia there was always change in the heart and aorta, but of course kidney disease tends to this.

I have once seen well-marked breathing of the kind under consideration in a patient apparently sinking from exhaus-

tion. The case was that of a gentleman to whom I was sent by Mr. Coulson, at that time senior surgeon to St. Mary's Hospital, when I was resident officer. He was suffering from cancer of the rectum, and was believed to be dying. I found him quite unconscious, and his respiration of the character described. I was by his bedside for several hours, and timed the cycle repeatedly, but cannot unfortunately find my notes. I took the breathing to be prognostic of a speedily fatal result, but to my astonishment he rallied and lived several months. He may have been under the influence of opium at the time, or have been suffering from kidney disease. I was not in a position to make inquiries on these points.

Many years ago I observed something very like Cheyne-Stokes' respiration during sleep in a gentleman now more than eighty years of age. When a person, especially advanced in years, is lying on his back in heavy sleep and snoring loudly, it very commonly happens that every now and then the inspiration fails to overcome the resistance in the pharynx of which stertor or snoring is the audible sign, and there will be perfect silence through two, three, or four respiratory periods, in which there are ineffectual chest movements; finally, air enters with a loud snort, after which there are several compensatory deep inspirations before the breathing settles down to its usual rhythm. In the case to which I allude there was something more than this. The snoring ceased at regular intervals, and the pause was so long as to excite attention, and indeed alarm; and I found, on investigation, that there was not simply obstruction by the falling back of the tongue &c., but actual cessation of all respiratory movements; these then began gradually, but did not at first attain sufficient force to overcome the pharyngeal resistance.

The typical Cheyne-Stokes' respiration is that described in the case related in this communication, in which, after a complete pause, there is gradual return of breathing and increase of the chest movements till they attain an exaggerated degree, and the rush of air in and out of the nose or mouth becomes distinctly audible, and again a gradual subsidence and pause. It is not an obtrusive phenomenon, and is no doubt often overlooked. When the subject of it is awake, it is often modified by excitement or attention. When he is asleep in a position which invites stertor—i.e., lying on his back—the cycle may again be disturbed by the obstruction to the entry of air. The feeble inspirations which immediately follow the pause fail to overcome the pharyngeal resistance to the entry of air, and the movements are thereby intensified, so that, instead of the gradual re-establishment of respiration, it begins with an explosive snort, and is at once deep and free.

The effect on the pulse no doubt varies. In the case related, in which it was specially noted time after time, and in other cases which have come under my observation, there has been no appreciable variation during the respiratory cycle. In others, again, there has been the increased frequency observed by M. Biot during the pause, and especially towards its close. All the theories on the subject are unsatisfactory, and I have none of my own to offer. The one fact respecting the phenomenon which appears to me to be presumably common to almost all the cases is the loss of elasticity and dilatation of the aorta, to which Hayden has called attention.

Seymour-street, Portman-square.

DISLOCATIONS OF THE THIGH: THE DOCTRINE OF THEIR MODE OF OCCURRENCE AND METHOD OF REDUCTION AS "GENERALLY ACCEPTED."

BY HENRY MORRIS, M.A., M.B.,
LECTURER ON ANATOMY AT, AND ASSISTANT-SURGEON TO, THE MIDDLESEX HOSPITAL.

WHEN, in the discussion which followed the reading of my paper on this subject at the Medical and Chirurgical Society on February 13th, Mr. Willett stated that some twelve or fifteen years ago a German professor—he believed Professor Busch—had visited the London hospitals, and demonstrated that all dislocations of the thigh-bone occurred during abduction, and that this doctrine had since been an article of faith at St. Bartholomew's Hospital, I accepted the statement on Mr. Willett's authority, not knowing of Prof. Busch's experiments or opinions.

Having since looked further into the literature of dislocations of the femur, I am in a position to state (1) that Prof. Busch's views are quite different from my own, and (2) that the doctrine which Mr. Willett supposes has for twelve years or more been generally accepted by the profession has been opposed during that time by at least one of the surgeons of St. Bartholomew's. From the translation of Prof. Busch's work in the Biennial Report of the Sydenham Society for 1863, I find that he describes the easiest way of reducing dislocations of the femur as follows:—"Dislocations backwards, iliac or ischiatic: flex the thigh to rather more than a right angle, adduct till the knee reaches somewhat over the opposite side of the body, and then rotate outwards." In another place he says:—"The dislocation is most easily produced on the subject by fixing the pelvis firmly, flexing the thigh at the hip and knee, and with a sudden effort adducting." I am indebted to Mr. Hulke for the exact words, which are—"Strongly flex the thigh, and with a jerk adduct, and simultaneously roll it inwards." Once more, referring to a statement by Gellé of Paris, that luxation of the femur may be most easily produced by "flexion without adduction," he says, "I have never been able to succeed in this way"; and, with regard to the capsule, he remarks that, though the rent varies in different cases, it is always torn near to the acetabulum, and at the "postero-inferior part"—i.e., in the strong ischio-femoral area of the ligament.

Possibly the explanation of Prof. Busch's results, which are so widely different from my own, is to be found in the following passage:—"Thus, in one experiment after the thigh had been flexed, *a small subcutaneous wound of the capsule was made with a tenotomy-knife*,[1] and the head forced out by violent adduction," &c. But the victims of dislocations of the hip are not submitted to a subcutaneous section of their capsules prior to the accident; while it is certain that many backward dislocations occur while the hip is *not* "strongly flexed," and that adduction in any position causes the head of the bone to press hard against the thick posterior acetabular part of the capsule.

I might stop here, but in justice to Mr. Willett I will not; moreover, I have no doubt that he will be gratified to know the name of his former instructor. Being at a loss to reconcile the discrepancy between Prof. Busch's opinions and those which Mr. Willett thought he had learnt from that gentleman, yet being satisfied that there was an explanation to be found of Mr. Willett's statement, I was glad to hit upon a brief article published in January, 1868, by Mr. Holmes Coote, "On Reduction of the Dislocations at the Hip-joint by Manipulation." In it Mr. Coote states that "there is but one primary dislocation of the femur at the hip—viz., that in the foramen ovale or downwards and inwards"; that the other forms of dislocation are secondary; that the object of manipulation is to make the head of the bone retrace its course towards the inner aspect of the joint, and that then, "the surgeon, with one movement, rotates the thigh outwards, and suddenly extends the limb, when the head of the bone slips into its socket with a snap." In illustration of these views Mr. Coote refers to several specimens in the museum of St. Bartholomew's Hospital, which, however, from what I have seen of them, I do not think support his case; on the other hand, they do not refute it, as Mr. Holthouse asserts; they are simply irrelevant. Mr. Coote concludes by saying, "These points were first demonstrated to me by Prof. Fabri." Thus it would seem that it was from his former colleague, Mr. Holmes Coote, or from Prof. Fabbri himself, and not from Prof. Busch, that Mr. Willett obtained his information.

Mr. Holmes, in his "Surgery, its Principles and Practice," briefly refers to Prof. Fabbri's experiments, which differ from mine in so far as that he divided the thick fascia lata subcutaneously before attempting dislocation, while I did not divide anything; and he continued to abduct until the capsule was torn away from "the inside and back of the acetabulum." Mr. Holmes remarks, "It is to be regretted

[1] The italics are mine, not Prof. Busch's or the translator's.

that this work is so little known in this country, never having been translated into English."

In spite of Mr. Coote's advocacy and Mr. Willett's adoption of Prof. Fabbri's views, Mr. Callender, I find, does not agree with them. In a paper published in THE LANCET of March 14th, 1868 (two months after Mr. Coote's article), Mr. Callender remarks that the head of the femur, by the method of manipulation usually practised, "incurs the risk of passing round the acetabulum, so that it, when the thigh is extended, comes up on the obturator side, or rises even to the pubes. This rolling of the head round the acetabulum is a chief objection to the plan of reduction by manipulation, and is almost sure to occur if the thigh is rotated outwards." He directs that the thigh should be flexed, and moved into a straight line with the body; and adds, "I have been anxious to give some explanation of the manner in which the method of manipulation acts, and to insist upon the importance of not abducting or rolling the limb outwards, for if this is done the head of the bone is almost certain to roll past the acetabulum to its inner side."

From these excerpts it is clear that the doctrine taught by Fabbri, and now quite independently advanced by me, so far from having been "generally accepted for the last twelve or fifteen years," has not found general acceptance even at St. Bartholomew's Hospital, where it was early entertained by Mr. Coote; but, instead, we find that in this one surgical school alone such opposite and contradictory explanations are given of the method and meaning of reduction by manipulation, that students who learn from Mr. Willett have to unlearn what they have been taught when they sit under Mr. Callender.

Nor was Mr. Willett more precise when he referred to the instructions given in Holmes's "System of Surgery," as a proof that the opinions commonly held, both as to the mode of occurrence and the method of reduction of dislocations of the thigh, were such as I had brought forward in my paper. If Mr. Willett will read the article in the "System" again, he will find on the same page (p. 909, ed. 1870) two statements—one above, the other immediately below, the paragraph to which he seems to have confined his attention—which prove that the writer differs from me on both these points. Mr. Holthouse, the author of the article in question, not only denies "that there is one primary kind of dislocation of the femur at the hip," and that all the others are secondary to it, but remarks that "the proper manipulation for the reduction of the backward luxations must be flexion and adduction of the limb." The object of the movements is stated to be to bring the head of the bone near to the acetabulum by flexion, next "to raise it from its edge" by adduction, and then to return it by rotation. But Mr. Willett, holding the views he does as to the mode of occurrence of the backward dislocations, could not follow out the mode of reduction recommended in the "System," and yet at the same time consistently believe that the head of the bone would thus be made to retrace its course into the acetabulum.

The directions given by Mr. Holthouse are the same as those offered by Prof. Busch, and how far they are successful may be gathered from the Professor's account of one of his own cases. An athletic farmer had dislocated the left thigh backwards, and it is stated, "When chloroform had been administered, the thigh was flexed to rather more than a right angle, adducted and rotated outwards, but although the head of the femur rose considerably during adduction, it would not slip in during rotation outwards, but returned to its abnormal position. An assistant now placed his forearm under the knee, the thigh was again flexed and strongly adducted, the assistant somewhat raised the limb, and then reduction was at once effected by rotation outwards." To be successful, therefore, it was found that adduction had to be accompanied by traction—i.e., extension,—so that the method employed was not simple manipulation, but manipulation combined with extension. That this must be so may be readily demonstrated on the subject or skeleton; abduction will bring the head into the right place for outward rotation to turn it into the socket, but the effect of adduction without extension is to force the head away from, not back into, the acetabulum.

The accounts given by the advocates of reduction by manipulation show that the principle upon which it succeeds is not properly or fully understood, even by those who have properly carried it out. According to some, including Prof. Nathan Smith and Mr. Callender (*vide* THE LANCET, 1868), the object is to bring the head of the femur to the least prominent part of the rim of the acetabulum, over which the abductor muscles will drag it (Smith), or it may be forced by depressing the femur (Callender). According to others, of whom Mr. Cock is one, it would seem to be a rule of thumb to "lift up, bend out, and roll in," with a general reference to "anatomical knowledge" and the leverage of the thigh. According to Bigelow, the chief thing is to relax the ilio-femoral ligament by flexion, and then to carry the head of the bone away from the iliac attachment of that ligament, and to do this *the capsule and rotator muscles are directed to be lacerated if need be.* Hamilton, who seems, on the whole, to agree with Bigelow, is doubtful about the principle of manipulation: he says—"It is not certain in our mind but that, when the principles which control the reduction are more completely understood, these evils"—inflammation, suppuration, and caries—"may be lessened; yet we can scarcely persuade ourselves that by any future observations the state of the question will ever be greatly changed."[2] Mr. Wormald, who, with Mr. Cock, was one of the earliest English supporters of manipulation, combined extension with manipulation, and thought his plan advantageous because "great force in rotating the thigh and directing its movements could be applied"; while, on the contrary, Hamilton prefers a process by which "the limb should follow constantly its own inclination." Mr. Nunneley, in an address to the British Medical Association in 1866, explains the *modus operandi* of manipulation by saying that, at the same time that the thigh is used as a lever, those muscles which will pull the head of the bone into place are called into action, and those which have a contrary effect are relaxed.

Surely with these discrepant opinions it cannot be asserted that the principle of manipulation has been thoroughly understood for the last fifteen years. Even Fabbri, from Mr. Coote's account, does not explain the *rationale* of manipulation to include (towards the end of the process) a *reverse rotation* of the head of the femur; nor is it probable he would, seeing he attributes the secondary forms of dislocation, not to the kind of rotation which is combined with flexion or extension at the moment of injury, but to "muscular action or the continuance of the dislocating force."

No doubt I have been anticipated by Prof. Fabbri in the demonstration that all dislocations of the thigh occur during abduction, and are therefore primarily downward and inward. But the Professor's mode of experimenting differs from mine, and I have still reason to believe that there is something of novelty in my communication to the Society; that in it will be found a simple explanation of the mode of occurrence of dislocations, and a more exact description of the principle upon which their reduction by manipulation is effected. Nor is it difficult by it to explain away what, not only in the days of Sir Astley Cooper, but till lately, seemed to be *an anomaly*—viz. (to quote from the System of Surgery), "the frequency of the dislocation of the femur upwards and backwards, that being the direction of all others most protected against dislocation, by the capsular ligament being there the strongest, the edge of the acetabulum most elevated, and the ligamentum teres offering the greatest hindrance to displacement in that direction."

Having been led quite accidentally, and while engaged in dissections for another purpose, into this inquiry I found that I had arrived at conclusions very different from those which, as a teacher of practical surgery, I looked upon as generally approved. But I am not in the least exercised about any claim to priority in this matter; I am only concerned to put the subject in its proper light so far as I am able.

Mansfield-street, Cavendish-square.

[2] Hamilton on Fractures and Dislocations, fourth edition, p. 656.

THE opponents of the Contagious Diseases Acts held a meeting this week in Devonport. Owing, however, to the cogent arguments of Mr. May (thrice Mayor of the town), Mr. Swain, Mr. Venning (town clerk), and others, the feeling expected to be expressed against the Acts turned completely round, and an amendment in favour of the measures was carried unanimously.

ON THE USE OF VOLITION AND MANIPULATIONS IN THE TREATMENT OF PARALYTIC AFFECTIONS.

BY T. E. MACLEAN, B.S. LOND.,
DEMONSTRATOR OF ANATOMY IN UNIVERSITY COLLEGE, LONDON, AND CLINICAL ASSISTANT AT THE ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

MR. OWEN'S report of a case of gunshot injury to the musculo-spiral nerve, which appeared in THE LANCET of November the 18th last, is one of great interest. Mr. Owen is much to be thanked for drawing attention to Dr. Kellgreen's method of treatment, though he does not appear to be aware that the treatment which he justly praises so highly has been carried out with excellent results for the past twenty years. This use of the will as a therapeutic agent in paralysis has also been advocated by John Hunter, Romberg, Dr. West, and others; but another point in the treatment worthy of more especial attention than it has yet received by the profession at large is the method of manipulation applied to the nerves by Dr. Kellgreen.

Friction is the only form of manipulation ordinarily made use of by the profession in the treatment of paralysis, and when the medical attendant orders friction the "medical rubber" is usually called in, and, without any instructions from the medical attendant, is left to his own devices, which in most cases consist in rubbing the skin with varying degrees of force, using as a lubricating agent some oil to which some special virtue is ascribed. If attention is directed to it one immediately recognises the fact that such manipulation as this can have little effect on anything but the skin itself. In order to affect the deeper structures a manipulation of a pummeling or kneading character is necessary, and that this will produce contraction in muscles is well known to the physician who frequently sees the pectoralis major thrown into flickering contractions when he is percussing. If this has not been noticed by any of those who read this communication let him bare his calf and flip it with the forefinger, and he will see, after a period of latent excitement, flickering contractions run through the deep muscles of the calf. The sensation experienced when the "funny bone" is knocked affords a familiar illustration of the effect of manipulation on a nerve, and just as the ulnar nerve can be stimulated by manipulation, so can the external popliteal as it lies just below the head of the fibula. Here the medical man who remembers the distribution of his nerves will have an advantage over him who does not.

Last summer, while in charge of Mr. Johnson Smith's patients at the Seamen's Hospital, Greenwich, I had an opportunity of putting this method of manipulation into practice in the following case:—

An ostler was admitted for a slight sprain of an ankle-joint. The patient a year previously had suffered a fracture, probably a Pott's, in the neighbourhood of the joint. The patient stated that the ankle had always been stiff ever since the fracture, and when admitted he had next to no power of flexing or extending the joint. On comparing the two calves, the smaller size of the one belonging to the injured limb was striking, and, on measuring the two calves at equal distances below the patella, the circumference of the injured limb was found to be three inches less than that of the sound limb. The ankle-joint was moved passively while the patient was under the influence of an anæsthetic, and faradisation and pummeling of the calf were made use of daily for about ten days. At the end of this time the circumference of the calf had increased three-quarters of an inch, and the patient had a slight, though decidedly increased, power of moving the ankle-joint. It may be said by some that the faradisation was the cause of this increase, but frequently the battery was out of order, "would not work"; and this want of an efficient battery to make the muscles contract recalled to the writer's mind some remarks he had heard as to the different kinds of manipulation which might be practised.

Gower-street, W.C.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASES OF SPLENIC LEUCOCYTHÆMIA.

(Under the care of Dr. GREENHOW.)

IN the following three cases of splenic leucocythæmia, for the notes of which we are indebted to Dr. Coupland, some interesting clinical facts are illustrated. The subjects were all females, and one only of the age of eight years. This case (the second) was interesting in the association of leucoderma with the splenic affection. It is matter for regret that the disease could not be followed to its termination in two of the cases, and in the third, in which death took place after the patient had been under observation for two years, no post-mortem examination could be obtained. This case—the most typical of the three—was marked by a great enlargement of the liver, an enlargement progressing *pari passu* with that of the spleen.

CASE 1.—Annie L——, aged eighteen, a maid-servant, was first admitted under the care of Mr. Nunn, for epistaxis, on Nov. 3rd, 1872, and transferred to Dr. Greenhow's care on Dec. 2nd, when the following notes were taken. Her family history is good. Five or six years ago she had an attack of acute rheumatism, not followed by any cardiac symptoms until about six months ago, when she began to suffer from shortness of breath—so much so that she was unable to walk upstairs without sitting down once or twice. The catamenia have not appeared for five months. Three months since she began to suffer from frequent attacks of epistaxis, for which she was eventually admitted into the hospital.

When admitted into the medical ward she was a fairly well-nourished, very anæmic girl, with blonde hair and fair complexion. She complained of pain in the left hypochondrium, and of rheumatic pains in the limbs. Physical examination showed the pulmonary signs to be normal, with the exception of occasional crepitation at both bases posteriorly. The area of cardiac dulness was normal. The apex of the heart impinged between the fifth and sixth ribs, half an inch within the nipple-line; the impulse was attended by a thrill, and a harsh blowing systolic murmur was audible at the apex of the heart, and posteriorly over the lower part of the left scapula. A short distance above the position of the apex beat a rough presystolic murmur could be heard; it was of limited extent. The area of splenic dulness was greatly increased, and the margin of the spleen could be distinctly felt in the left hypochondrium, four inches and a half below the costal arch. The spleen was firm and resisting, and tender on pressure; liver dulness normal; urine, sp. gr. 1015, yielded a bare trace of albumen when tested with cold nitric acid. The patient's gums were rather spongy, and a few faint vibices were visible on the legs. The blood was examined microscopically, and showed a marked deficiency in the number of red corpuscles, which did not readily form rouleaux, but rapidly became shrivelled and crenated. The number of white corpuscles in the field (½-in. obj.) varied from fourteen to twenty. They were not therefore present in very marked excess considering the diminished number of red globules. Pulse 125; temperature 99°.

The patient suffered from frequently recurring attacks of epistaxis, and occasionally from bleeding from the gums; also from occasional vomiting, the vomited matters in one or two instances containing blood (from the nose?). Once there was some hæmorrhage from a spot on the right lower eyelid near the inner canthus; it was checked by the application, at Mr. Hulke's suggestion, of a mixture of snow and solution of perchloride of iron. The pulse ranged from 90 to 130; the carotids were often seen to pulsate powerfully. The temperature ranged from 98° to 100°. The urine varied

in specific gravity from 1015 to 1025; it sometimes contained a trace of albumen, often crystals of uric acid, and on one or two occasions a few hyaline casts.

On January 29th, 1873, the patient was seized with rigors, followed by heat and sweating. Her temperature rose to 104·2°; pulse 110. She complained of headache, and of pain in the left hypochondrium, which was tense and resisting, and very tender on pressure.

Feb. 2nd.—Loud pericardial friction inside the nipple; impaired resonance over the bases of both lungs; vocal vibration impaired; breath-sounds feeble; no râles.

Two days later there was evidence of much pericardial effusion; friction still audible. Heart's action irregular in force and rhythm.

March 11th.—Condition improved. Area of cardiac dulness nearly normal. Resonance fair over the bases of the lungs, except over a limited space at the base of the right lung. She can now bear pressure in the left hypochondrium.

20th.—Anæmia less; but the blood shows a considerable excess of white corpuscles.

Early in April she relapsed into a very prostrate condition, and for some days she lay in a semi-comatose state; breathing somewhat stertorous. When raised she complained of severe headache, and also of pains at the back of the neck and between the shoulders. She answered questions with evident reluctance. The superficial veins of the abdomen were now observed to have become enlarged, and the liver extended two inches below the costal arch. She now again improved, and remained free from epistaxis or other hæmorrhages for upwards of a month, when it returned in a slight degree on two occasions. No other change of importance took place. The spleen remained of the same size, and excepting two or three enlarged submaxillary glands on the left side, no enlarged glands could anywhere be found.

The treatment was varied from time to time, but consisted mainly in good diet with port wine, and, medicinally, iron in various forms. Most benefit seemed to be derived from syrup of iodide of iron with iodide of potassium. She left the hospital at the beginning of June for the country, and promised to return, but did not do so, and information of her death was received about six months afterwards.

CASE 2.—Elizabeth R——, aged eight years, a fair-complexioned child of strumous aspect, was admitted on Feb. 5th, 1873. She had lost three brothers and a sister from whooping-cough and measles; the sister had enlarged glands in the neck. The child herself had enjoyed good health until about eighteen months before admission, when she began to get weak and to lose appetite; the debility increased markedly seven weeks before admission, when the abdomen began to enlarge and became painful. She became unable to walk, and frequently cried with pain in the abdomen; at the same time she lost flesh rather rapidly and suffered from cough.

On admission, she was a delicate, emaciated, strumous-looking child, fair-haired, with blue eyes and long curved eyelashes. The skin of the body generally, and especially that of the abdomen, contrasted with the face in being of a dusky-brown tint. On each side of the thorax, and placed perfectly symmetrically, was a patch of leucoderma of the size of a threepenny-piece, and circular in outline; the central part of each patch was perfectly white and glistening, whilst the margin of healthy skin appeared by contrast darker than elsewhere. Two similar patches, as to size and shape, were seen over each anterior iliac spine, and others, less defined and unsymmetrically placed, on the sacrum, in the axilla, and on the right side of the chest. The submental, cervical, and axillary glands were slightly enlarged and hard; there was notable prominence of the left side of the abdomen, which was occupied by a tumour extending nearly to the umbilicus, and below to within an inch of the iliac crest, passing above to the upper border of the eighth rib in the axillary line, as ascertained by percussion. Its surface was resisting and anterior margin readily felt, interrupted by a distinct notch. The hepatic dulness extended from the upper border of the fifth rib to nearly an inch below the costal arch, where its lower border could be made out by palpation; it was well defined and resisting, but smooth. The pulmonary resonance was fair, but in the left infraclavicular region crepitant râles could be heard with both respiratory sounds, and on the right side the breathing at the apex was harsher than elsewhere. The first cardiac sound was rough at the apex; no murmur. Pulse 92; temperature 98·2°. Urine: specific gravity 1030, acid. The blood examined microscopically on several occasions showed marked excess in the proportion of white corpuscles as compared with the red. (The actual number of leucocytes present in the microscopic field is not noted.)

On March 19th the general aspect of the patient had improved, but the face was still pallid, the abdomen was larger and more tense, and the spleen had increased somewhat in size, reaching nearly to the crest of the ilium. A well-marked systolic murmur had replaced the roughening of the first sound of the heart noted on admission. In the interval vomiting had occasionally occurred. An average of twenty-nine white corpuscles in the field (⅛ in. obj.) was observed on microscopic examination of the blood at this time. The leucodermic spots noticed on admission persisted, with the addition of two fresh patches over the lower part of the sternum. The treatment consisted chiefly in good diet, syrup of iodide of iron and iodide of potassium. Cod-liver oil was tried, but had to be discarded owing to vomiting. The child was sent to the seaside in the month of April, with decided improvement in general health. She has, unfortunately, been since lost sight of.

CASE 3.—Eliza B——, aged thirty-three, unmarried, was admitted on May 2nd, 1873. Both her parents were then living, and two brothers and one sister. One of her brothers suffered from spasmodic asthma. She herself had enjoyed somewhat indifferent health, and had been subject to "bilious" attacks. For eleven years she had been residing with her sister at Eastbourne, where they each kept a house for visitors. During the whole of the summer of 1872 she felt less able to do her work than formerly, and occasionally suffered from pain in her left side. In October she came to London, her native place, for a month, on account of her pain increasing, and then returned to Eastbourne. In January, 1873, she noticed for the first time that the left side of the abdomen was swollen, and in the same month after the swelling was perceived she suffered from attacks of shivering at irregular intervals of one, three, or four days, a week, or even a fortnight. The attacks came on usually in the afternoon, and lasted for an hour or more, when they were followed by heat and sweating for about an hour. They formed a prominent feature in her illness almost throughout its whole course. She had never had ague; and it does not seem to be known at Eastbourne. She came to London at the end of January, and was under the care of Mr. Norton, of Bayswater, who sent her into the hospital. She lost flesh; but her appetite had improved of late. Catamania have not appeared for three months.

On admission she was somewhat emaciated; complexion sallow; surface of body generally of a pale-brownish hue, especially the abdomen; and in each flank some leucodermic spots, the best defined being on the right side. The patient stated that her skin had become darker since her illness, and that the alteration in colour had been noticed by her friends. There was marked bulging of the left lower ribs, and the subcutaneous veins, thoracic and abdominal, on this side, were enlarged. The left half of the abdomen was occupied by a firm, smooth tumour, passing from beneath the costal arch at about the junction of the eighth and ninth rib-cartilages, obliquely forwards and downwards to the right of the linea alba; thence its margin, in which a distinct notch could be made out, fell vertically downwards to the level of the umbilicus, and thence obliquely down and to the left, its lowest point being two inches below the umbilical level. On percussion, the limits were less well defined, but, above, the dulness obtained over the surface of the tumour, merged in that of the left hepatic lobe and the cardiac area, whilst in the left axillary region dulness began at the upper border of the eighth rib. The vertical measurement of the dull area from this point in the axilla to its lower limit, two inches above the iliac crest, was seven inches. The liver dulness, in the mammary line, was four inches in depth, not extending below the costal arch, but in the middle line the lower limit of hepatic dulness was three inches below the xiphoid, and the surface of the liver was palpable. The girth of the abdomen at the umbilicus was thirty and a half inches, and in addition to the leucodermic spots above mentioned were a few slightly raised rose spots, which distinctly disappeared on pressure. Beyond some impaired resonance and harsh breathing at the right apex, the pulmonary signs were normal. The heart's

impulse was diffused, being visible in the third, fourth, and fifth interspaces, the apex impinging just below the fifth rib. The sounds were rough, the pulmonary second sound being markedly accentuated.

Microscopical examination of the blood showed a large excess of white corpuscles, ranging in size from bodies less in diameter than a red corpuscle to others twice the size of these bodies. The relative proportion of the white to red was estimated roughly as one to four.

No material change took place in the patient's condition during her stay in the hospital. She had frequent and profuse sweats, without any tendency to regular periodicity. The pulse varied much in frequency—viz., from 76 to 132, whilst the temperature ranged from 97·4° to 102°, being very irregular, the maxima being as a rule in the evening, and the morning intermissions being usually from 1·5° to 2°. The urine was mostly of high specific gravity and very acid, often throwing down a copious deposit of lithates and never showing any trace of albumen.

The treatment pursued consisted in quinine and sulphuric acid, which, however, failed to control the high temperature or sweating, and also in the administration of syrup of iodide of iron with iodide of potassium.

The patient left the hospital in June, 1873, and in the autumn returned to her avocation at the seaside. The disease continued to make steady progress, but it was not sufficiently advanced to confine her to bed until the summer of 1874. The symptoms were—increasing emaciation; repeated febrile paroxysms of intermittent type, almost regularly quotidian; increasing pigmentation of skin; progressive enlargement of spleen and liver, which came to fill nearly three-fourths of the abdominal cavity; and much discomfort, gastric, cardiac, and pulmonary, produced by the enlarged organs. There was never any hæmorrhage; and death took place from asthenia in May, 1875, when the emaciation was most extreme, and dropsical effusions had occurred in the peritoneum and lower limbs.

EDINBURGH ROYAL INFIRMARY.

PERSISTENT GONORRHŒA OF THE DUCT OF THE LEFT GLAND OF DUVERNEY.

(Under the care of Dr. MATTHEWS DUNCAN.)

We are indebted to Mr. Massiah for the following notes.

G. F——, aged twenty-three, single, said that she was exposed to the risk of venereal infection five years before her admission on Nov. 30th, and that ever since this she has had a vaginal discharge. For a month past she had suffered greatly from frequency and painfulness of micturition. The following notes were taken at the time of admission.

She is a strong, healthy woman; menstruation regular. The urine is found to contain pus, which was afterwards found to be vaginal. There is a neuromatous polypoid caruncle at the orifice of the urethra. The vulva presents some spots of superficial inflammation. The hymen has been lacerated; its free edge is at several points acutely inflamed. About the lower part of the vagina there is some purulent discharge, and on the same part, near the hymen, are some red spots denuded of epithelium. There is swelling and redness of the cervix uteri, with a ring of ulceration around the os. The cavity of the cervix is filled with viscid muco-pus. The bladder is found, by sounding, to be capacious, soft, and not tender. The urethral caruncle was excised.

The catarrh of the cervix was successfully treated by a single application of a stick of zinc-alum about an inch long, managed in the usual way. In addition, a very weak solution of the sulphates of zinc and alum was used daily as a vaginal lotion.

After three weeks, the irritability of the bladder having disappeared on the removal of the urethral caruncle, there still remained a purulent discharge, which accumulated about the orifice of the vagina; and in the same region there was a degree of redness of the mucous membrane.

On careful examination, it was now found that the left duct of Duverney's gland was full of pus, several drops being easily squeezed out of it. This was treated by injecting on two separate occasions a solution of nitrate of silver, twenty grains to an ounce, by means of a syringe for the lachrymal duct.

Soon afterwards the patient was dismissed, cured.

Remarks.—In this case, the irritability of bladder was naturally, before ocular examination of the urethra, supposed to be a part of the results of the old gonorrhœa. The caruncle of the urethra was also a natural explanation of it, and its removal by scissors demonstrated that the irritability owned no other cause.

The inflammation of the vulva and lower part of the vagina was in like manner kept up and rendered intractable by the persistent discharge of pus from the duct of Duverney's gland, the inflammation of which was not subjected to treatment. This gonorrhœa was not earlier discovered because the glands of Duverney were not enlarged or inflamed, as they often are in such cases. There was no tenderness or swelling to call attention to the part. The removal of the inflammation of this duct was necessary to complete the cure of the case.

BROMLEY COTTAGE HOSPITAL.

ACUTE RHEUMATISM, HIGH TEMPERATURE, TREATED WITH SALICIN; DEATH.

(Under the care of Dr. BEEBY.)

M. S——, aged twenty-five, a stout, well-nourished woman, was admitted on Nov. 17th, 1876, suffering from acute rheumatism. She had been ill four days before admission, and had been freely purged. Her wrists, ankles, and knees were swollen and tender; tongue furred. There was profuse acid perspiration, with high-coloured and turbid urine; had passed restless nights; the heart-sounds were clear. Ordered ten grains of compound ipecacuanha powder and one grain of calomel, and ten grains of salicin in milk every two hours; joints to be wrapped in cotton-wool. At this time, the morning of Nov. 18th, the pulse was 120; and temperature 103·7°. In the evening of same day, pulse 120; temperature 103·8°.

Nov. 19th.—Symptoms continued unabated. Ordered ten grains of salicin every hour, and repeated Dover's powder and calomel. Pulse and temperature the same.

20th.—Pain less; can move and turn. Perspiration less; bowels relieved. Pulse 116; temperature 103·8°. In afternoon pain somewhat increased and temperature rising, therefore dose of salicin was doubled. Ordered thirty grains at once, and to repeat twenty grains every hour. At this time pulse was 112, and temperature 104°. At 10 P.M. she felt much easier; nevertheless the pulse was 120, and the temperature 105°. Had slight diarrhœa, so fifteen minims of tincture of opium were administered at night.

21st.—Morning: Pulse 120; temperature 103·8°. Slept better. No pain, except a little when she moves. Complained of vertigo, with curious sensations as of cart-wheels going along the road, and of humming and buzzing in the ears. Evening: No pain; head easier. Bowels moved freely. To discontinue salicin and take one grain of opium pill, and fifteen drops of tincture of opium after four hours if necessary. Pulse and temperature the same.

22nd.—Passes a large quantity of clear urine; diarrhœa checked. Tongue clean and moist. No pain in joints when she lies quiet. Pulse 112; temperature 104·8°. As temperature was high and bowels quiet, to take salicin again, or rather, this time salicylic acid, thirty grains, in combination with one drachm of phosphate of soda, every two hours; but as at 4 P.M. the patient complained that the medicine caused a disagreeable burning sensation, though it relieved pain, only two doses were given, and the salicin preparation discontinued altogether, since temperature still increased, and symptoms of delirium occurred. At 9 P.M. patient was restless, still inclined to wander. Face was flushed, eyes bright, tongue and skin dry, with eruption of miliaria; no articular pain. Pulse 145; respiration 40; temperature 105°. Not having sufficient assistance to administer cold baths in existing state of patient, cold was applied to the head and cold compresses to chest; draught administered, containing twenty grains of chloral and twenty drops of solution of the acetate of morphia.

23rd.—At 2 A.M. the patient was almost moribund. Just

before death the thermometer registered a temperature of 111° in the axilla.

Autopsy, thirty eight hours after death.—All the organs of the body were healthy, with the exception of slight commencing endocarditis. The lungs were congested, and the heart and large vessels contained a quantity of dark fluid blood. The mucous membrane of the stomach showed several small patches of ecchymosis.

The above case presents several points similar to that recorded by Dr. Sturges in THE LANCET of Dec. 9th. It is of course impossible to say whether cold baths would have lowered the temperature, but the case instanced the fact that persons may die in acute rheumatism seemingly from no other cause than high temperature, and a post-mortem examination reveal little or no morbid appearance beyond congestion of the lungs. It also proves that salicin, though undoubtedly a useful remedy in many cases of this disease, does at times fail to reduce the temperature.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE ordinary meeting of this Society was held on February 27th, Sir James Paget, President, in the chair. There was a large attendance of Fellows and visitors, and the meeting was prolonged beyond the usual hour to allow of the discussion arising out of an important paper by Mr. Spencer Wells, giving the results of 300 additional cases of ovariotomy. This paper was preceded by one by Mr. Morrant Baker upon Necrosis without Suppuration, which was illustrated by a series of specimens and drawings.

The first paper read was entitled, "On Necrosis without Suppuration; with a case of Intra-osseous Necrosis of the Femur, without Suppuration, for which Amputation at the Hip-joint was performed," by W. MORRANT BAKER, F.R.C.S. The author begins by relating the particulars of a case which was admitted into St. Bartholomew's Hospital, under his care, in August, 1872, with the following history. The patient, a man aged twenty, was quite well until about ten weeks before his admission, when he began to suffer from pain and swelling in the left thigh. Both pain and swelling gradually increased, until, at length, being unable to continue his work, he was admitted into the Holborn Union Infirmary, under the care of Mr. Norton, at whose request he was subsequently transferred by Mr. Baker to St. Bartholomew's Hospital. Before he left the infirmary, however, as he was walking in the ward, the left leg gave way suddenly under him, and he fell, and it was found subsequently that the femur had been fractured in its middle third. At the time of the patient's admission into the hospital there were the following symptoms:—The left lower limb, apparently shorter than its fellow by an inch or two, lay helplessly on its outer side, with the leg slightly flexed. In the thigh was a large tumour, hard and incompressible, which occupied the whole of the middle third of the femur, and extended *below* to within a short distance of the knee-joint, and *above* to the trochanters. In its middle third, where the swelling was greatest, the femur was considerably deformed by an ununited fracture. The integuments and other soft parts were quite natural. There was neither redness nor œdema, nor could fluctuation, as of confined fluid, be at any part detected; nor were there any constitutional symptoms indicative of inflammation or impending suppuration. The patient was said to have lost much flesh, and he was evidently in process of being gradually worn out by acute pain and sleeplessness. His temperature was below 100° F. The femoral glands were not enlarged. There was no doubt in the minds of all who saw the patient that the case was one of malignant tumour of the femur, and all were unanimous in the belief that nothing short of amputation would give him any chance of relief. The limb was accordingly amputated at the hip-joint. The patient rapidly recovered flesh and strength after the operation, and, in the course of a few weeks, left the hospital well. On dissecting the limb, it was found that the disease was not malignant tumour, but necrosis. Nearly the whole of the femur had perished, and at the seat of fracture there was but little union. But there was no sign of suppuration, and not a drop of pus could be anywhere detected even after section of the whole length of the bone. In some parts the dead bone was beginning to separate, while in others it was still immovable. A large quantity of new bone had been produced by both the periosteum and medullary membrane, and the dead bone was "locked" in a manner which must have rendered futile all attempts to remove the disease by any other method than amputation. The author proceeds to the consideration of the questions which naturally arise with respect to conditions so remarkable, extensive necrosis without the formation of pus being so rare as to be almost unknown to surgical pathology. The following are the conclusions to which the various facts and arguments brought forward by the author seem naturally to lead:—1. That nearly the whole of the shaft of a long bone may perish, and that nevertheless suppuration after several weeks, or months, and possibly even years, may be still absent. 2. That necrosis of a long bone may, in the absence of suppuration, closely simulate malignant disease, even to the extent of undergoing so-called spontaneous fracture, and that the latter event may not, for at least many weeks, be followed by suppuration. 3. That this apparently strange deviation from the course of the symptoms usually accompanying necrosis is probably due to the fact that the death of the bone is the last of a series of changes of which the earlier consist of chronic inflammation, with hypertrophy and sclerosis. 4. That the symptoms of necrosis occurring in the course of chronic osteitis, more especially in adults, may be expected to pursue and do pursue, a course which is different, in many respects, from that which is characteristic of the more common examples of necrosis. 5. That suppuration is not an early event, usually, in cases of necrosis from chronic osteitis. 6. That in such cases of necrosis the endosteum, as well as the periosteum, contributes a large quantity of new bone. 7. That it may be well, for distinction's sake, to term the variety of necrosis in which the sequestrum is enclosed between periosteal and endosteal new bone, *intra-osseous* necrosis, whether with or without suppuration. 8. That there exist cases of intra-osseous necrosis in which complete removal of the dead bone by a surgical operation is, from the nature of its connexions, a practical impossibility, and for which, therefore, if the symptoms are sufficiently distressing, amputation is the best remedy. 9. That, in favourable cases, when the disease is not extensive, the surrounding parts, after suppuration, may heal, although some dead bone is permanently confined within its new sheath; the separation of the dead from the living being indefinitely postponed. 10. That the peculiarity of the case which forms the text of the paper is to be found rather in the variety of spontaneous fracture, and of opportunities of examining the bone by section, in cases of necrosis from chronic inflammation, at an early stage, before suppuration has occurred, than in the nature of the case itself. The paper is illustrated by drawings and specimens of intra-osseous necrosis, with and without suppuration; and also for comparison, by illustrations of chronic osteitis which has led to hypertrophy and sclerosis, but not to necrosis.—Mr. BARWELL agreed with the conclusions arrived at by Mr. Baker. He had had some experience of the form of necrosis described, and he referred to the difficulty in its diagnosis, especially when affecting a deeply seated bone like the femur; the pain, emaciation, and occasional glandular enlargement, causing it to simulate malignant disease.—Mr. T. SMITH also agreed as to its resemblance to malignant disease. He related the case of a patient under his care at the Hospital for Sick Children, who was admitted with what at first appeared to be a rapidly growing tumour of the shaft of the femur. It was found that it diminished after the child had been kept at rest; and again increased on using the limb. This alternate diminution on resting and painful increase on exercise still continued, although it was now two years since the swelling first appeared. He would not operate unless absolutely compelled.—Mr. CROFT supposed that there must be inflammatory effusion in these cases, to account for the pain; but he could not understand

how the cloaca in Mr. Baker's specimen was formed unless there had been suppuration.—Mr. MORRANT BAKER, in reply, said he had no doubt that there was some effusion, but there was not a drop of pus to be seen in his specimen. He believed the "cloaca" to have been artificially produced in making the section of the bone; and one of the specimens from the museum of St. Bartholomew's Hospital showed no cloaca at all.

A paper was then read on "Three Hundred additional Cases of Ovariotomy, with Remarks on Drainage of the Peritoneal Cavity," by Mr. T. SPENCER WELLS, F.R.C.S. The author has arranged, in a table similar in form to those in which he brought 500 cases of ovariotomy before the Society between 1859 and 1872, 300 additional cases, representing the whole of his practice, from the fifth to the eight-hundredth case, distinguishing the cases performed in the Samaritan Hospital from those in private houses and in nursing institutions. The mortality in the sixth series of 100 cases was 29, in the seventh and eighth 24. This very nearly corresponds with the general mortality in the 500 cases previously reported. But the author believes that the latter series comprises many more operations, in proportion, performed under very unfavourable or almost hopeless conditions. In many cases where formerly he thought it right to put so very unfavourable a prognosis before a patient and her advisers that they probably did not desire or approve of operation, he has latterly been encouraged by recoveries in some cases apparently almost hopeless to express a more hopeful opinion; and although in some cases very unexpected recoveries have been recorded, the result has often been what was feared, and the influence upon the number of deaths in proportion to the recoveries is quite appreciable. The author then discusses the influence of drainage of the peritoneal cavity—this most important of recent modifications of operative procedure—upon the results. He traces the history of the practice from the early days of ovariotomy, when drainage by the ligatures securing the pedicle was the rule of practice; to its disuse when the *extra*-peritoneal treatment of the pedicle, and its *intra*-peritoneal method by ligature or cautery, were very generally adopted. He considers the occasional use of puncture and drainage—with or without simple or antiseptic injections,—when called for after operation, to be no foundation for recent recommendations to prepare at the time of operation for drainage or injection in every case. Of the 300 cases now brought before the Society he had only made provision for drainage at the time of the operation in eight, and in only eleven other cases did fluid afterwards escape by opening of some portion of the wound, or by vaginal puncture. In some few of the fatal cases he thinks either primary or secondary drainage might have been useful, but he believes that drainage should not be a general practice in ovariotomy, but should be reserved for the exceptional cases where collections of blood or serum may be expected to follow the operation. The author then describes the different modes of draining, and of using simple or antiseptic injections, reserving for another communication the important question of the more complete adoption of antiseptic precautions before, during, and after ovariotomy.—Mr. NUNN said that thanks were due to Mr. Wells for his bold innovation in the method of treating the peritoneal cavity with a view to combat inflammatory changes after operation; he had shown what was possible to be done, and had stated also what he believed to be impossible.—Mr. BRYANT was pleased to hear the opinions held in the paper as to drainage of the peritoneal cavity, for he had recently under his care five cases of ovariotomy, in all of which drainage was resorted to. Four of these cases did well, and he thought that in three of them at least the good result was due to the drainage. He had noticed the enormous discharge of serum that drained away from the peritoneal cavity, and he could well understand how, if drainage were not employed, either all this fluid must be absorbed, or else, as Mr. Wells had pointed out, must undergo septic changes. In the three cases to which he particularly alluded there were numerous highly vascular adhesions, and there was great difficulty in arresting the hæmorrhage from the surface of the peritoneum. At the time of the operation he had thought each of these patients had but a a poor chance of recovery, from the danger arising out of the necessary manipulation, and the risk of subsequent hæmorrhage. Of the total number of five cases the glass tube had been used in three, and the ordinary indiarubber tube in two.—Mr. BARWELL said that when a Fellow of the Society recounted so large a series of cases of one operation, with such admirable results, it was not possible to criticise, but only to ask for information. He would then like to know whether in the cases in which a drainage-tube was introduced secondarily the wound in the abdominal wall had to be reopened, or in what manner the tube was introduced.—Mr. T. SMITH said they had been dwelling that evening upon the bright side of ovariotomy, for the results obtained by Mr. Spencer Wells were as good as they possibly could be, when it was considered that he did not shrink from performing the operation in every case in which it could well be attempted. Better results and more perfect tables of statistics might be obtained by surgeons of less courage, who would select only the most favourable cases, but that selection would be most disastrous, and would result in the sacrifice of many lives. What would be said of a surgeon who refused to operate in a case of strangulated hernia, although frequently the operation was undertaken with very remote chances of success? Hence if it became an object to produce rival tables of statistics it would only be at the cost of human life, for the most favourable lists would be those in which the desperate cases were not operated upon. But he might say there was a dark side to ovariotomy; it was this: In an early report of the Samaritan Free Hospital (and identified as Mr. Wells was with that hospital he did not think he was responsible for that report) a contrast had been drawn between the mortality from ovariotomy there and in the large general hospitals of London. It was shown that whereas in the latter the mortality was as high as 76 per cent., at the former it was only 21 per cent. It was some relief to find that in Mr. Wells's cases the mortality was 25·66, and he (Mr. Smith) believed that the enormous fatality imputed to the general hospitals was capable of explanation. In the first place, those statistics were compiled at a time when the operation was admittedly less successful than at present; and, in the second place, it was the custom of the registrars at the general hospitals to include under the head of ovariotomy not only the cases of the completed operation, but also those in which the operation was incomplete, the abdomen being opened, but after unsuccessful attempts at removal of the tumour, the operation had to be abandoned; and also those cases in which the abdomen was opened and the operation no further proceeded with. But in the statistics of the Samaritan Hospital and of ovariotomists generally, only cases of completed ovariotomy were included; and he believed that if the results of the incomplete operations were added, the mortality would be found to be greatly increased. This explanation was necessary, for the reports of the Samaritan Hospital were widely circulated and conveyed false impressions. There were other reasons also why the mortality in various general hospitals reached so high a figure, and why it was impossible to compare their statistics with those of the special institution referred to. The experience of one surgeon, and he of all others the most fully experienced in the operation, was contrasted with the results obtained by many surgeons—some doubtless fully qualified to perform the operation, but others, he might say, disqualified from inexperience and other causes. There was no reason why in a general hospital as good sanitary conditions should not be obtained as in the Samaritan Free Hospital, although such skilled nursing and specially qualified resident officers might not be obtained, and of course it would be years before all surgeons would have anything approaching the experience of Mr. Spencer Wells. He believed that the success of the Samaritan Hospital was a personal success; and it was interesting to note that those who performed the operation for Mr. Wells in his absence met with like success, for they had been trained under him. The great success obtained by Mr. Spencer Wells was due to his possessing sufficient experience, a sound judgment, a fertility of resource for emergencies, a courage under dangers, and a becoming modesty, which on no occasion allowed him to attribute his results to his own skill as an ovariotomist. He believed that Mr. Spencer Wells had done more in his generation to diminish the sum of human misery than any other surgeon, past or present. Mr. T. Smith concluded by asking whether the drainage-tube should be introduced when there was a large collection of fluid in the

peritoneal cavity, and whether in the event of an ovarian cyst being met with deeply placed behind the intestines, it would be considered best to attempt its removal, or to stitch it to the wound.—Sir JOSEPH FAYRER inquired as to the use of antiseptic precautions in ovariotomy.—Mr. HULKE, referring to the high mortality from ovariotomy in general hospitals, said that it was found at the Middlesex Hospital, in the early days of the operation, that every case proved fatal. The cases were then treated in general wards, but for some years past, since the adoption of isolation, the mortality had changed. He believed (quoting from memory) that out of the last six cases, each treated in a separate ward, two had died.—Dr. GRAILY HEWITT congratulated Mr. Spencer Wells upon his success in this department of surgery, and believed that very little remained to be done in the way of improving the details of the operation. He had assisted Mr. Wells in his early cases, and had watched the development of ovariotomy in his hands with great interest. Dr. Hewitt said that he had himself operated thirty-five times, and although his success was not so great as that of Mr. Wells, he was satisfied with it. He had never refused to operate where the operation was done with a view to save life, and consequently he had had some bad cases, and he believed that for the same reason Mr. Wells was right in saying that many desperate cases came to him. Dr. Hewitt advocated bringing the pedicle to the wound, and treating it externally, and thought that the main direction in which improvement might be made in the operation was in the treatment of the pedicle. Mr. Wells had not mentioned the use of the cautery, which he (Dr. Hewitt) preferred to ligature when it could be employed.—Sir JAS. PAGET, in calling upon Mr. Wells to reply, said that it was with great pleasure that on the last occasion of his holding the chair at an ordinary meeting of the Society he had listened to so important a communication, and he deemed the operation of ovariotomy, as perfected by Mr. Spencer Wells, to be one of the greatest achievements of surgery in this century. Contrasting the results of the operation as performed at present with those which he remembered in his early professional career, he could testify to the very greatly-increased success obtained by all surgeons now. The gain was not limited to ovariotomy alone; the success of that operation had led to an extension of the whole domain of peritoneal surgery. Surgeons acted more boldly than before in operations involving the peritoneum; and the whole principles of surgery were improved by the study of these cases.—Mr. SPENCER WELLS, in reply, said that in Mr. Bryant's cases the escape of a large quantity of fluid did not show that the use of the drainage-tube was necessary; the tube itself might act as an irritant. With regard to Mr. Barwell's query, he said that the presence of fluid could be felt per vaginam, and a trocar being introduced into the posterior cul de sac of the vagina, a drainage-tube could be inserted there. It was not therefore necessary to open up the abdominal wound in performing drainage secondarily. Referring to Mr. Smith's observations, Mr. Wells said that, although he was not personally responsible for the report of the Samaritan Free Hospital, yet he thought it had done good, and he believed it was largely due to it that better results had subsequently been obtained at the general hospitals. The report was too detailed for public circulation, but on the whole its influence was a good one. The operations at the Samaritan Free Hospital were not all performed by himself alone; thus last year Dr. Bantock and Mr. Thornton had fifteen cases between them, and only one death, while the whole mortality during the year had been five cases out of a total of fifty-five operations. It would be obviously unfair to class together the incompleted and completed operations. Some of the former were cases of enlarged spleen, others of fibroid tumour of the uterus. But taking all these cases, and cases of exploratory incision, he did not believe the mortality in them was so very high. The present series of 300 cases did not include many of incompleted operations. No doubt much was attributable to sanitary conditions and good nursing; but there was no resident medical officer at the Samaritan Free Hospital, although he (Mr. Wells) wished to get one. He saw no reason why as good conditions and nursing could not be obtained at general hospitals. The drainage-tube was inserted, not in cases of ascitic accumulation, but in cases where, from bleeding, the separation of adhesions, or the rupture of a cyst, it was thought the fluid left in might decompose and give rise to septic poisoning. The question of the treatment of cysts of the broad ligament must be left to the time of operation. His views as to the value of antiseptics were unsettled; he had thought of testing it by treating 100 cases on that plan, and was nearly commencing it with his 800th case. Since then he had had a series of 27 successful cases consecutively, a result which would have been attributed to the antiseptics if he had introduced them. Probably some antiseptics less objectionable than carbolic acid might be of use; but he had left the question to future settlement. He had not often used the cautery, which, although a good measure, was not, he thought, to be preferred to the clamp or ligature. In concluding, Mr. Wells expressed his gratitude to Sir James Paget for his encouraging remarks, which were a sufficient reward for his exertions.

At the close of the meeting Mr. DONALD NAPIER showed an ingenious Self-retaining Catheter designed by himself.

CLINICAL SOCIETY OF LONDON.

THE ordinary meeting of this Society was held on Friday, the 23rd ult., Mr. Callender, the President, in the chair. The papers read included one on a rare case of congenital dislocation of the knee, by Mr. Godlee; a very rare and interesting case of hydatid of the lung, by Dr. Greenfield, which gave rise to some discussion; and a case by Mr. Norton, which raised the points of the use of carbolised catgut ligatures, and also of the origin of an embolism of the basilar artery.

Mr. RICKMAN GODLEE exhibited a child, sixteen months old, who had been the subject of Congenital Dislocation of one Knee forwards. The child was first seen by him when seven weeks old, and was said to have a knee-pan at the back of the limb instead of in front. With the exception of the left lower limb the child was well-made and well-nourished. This limb was constantly held in a position of flexion of the hip and hyper-extension of the knee, and occasionally carried up spasmodically across the chest and abdomen. All the ligaments of the knee were extremely loose, so that free movement was possible towards both sides and anteriorly, but, owing to the spasmodic contraction of the extensors, an actual dislocation of the tibia forwards had taken place upon the lower end of the femur, and flexion was extremely difficult. The condyles of the femur were unusually prominent in the ham. The patella was present in the normal situation, but Mr. Godlee thought it distinctly smaller than the right. There was no difficulty in reducing the dislocation. The psoas, iliacus, and rectus were spasmodically contracted, and the spasm was increased by manipulation, producing hyper-extension. There was no clubfoot or nervous disorder. The mother believed that the child received some injury during labour. The limb was at first placed upon a straight posterior splint, and then in an apparatus consisting of sheaths to enclose the leg and thigh, united at the knee by lateral jointed bars, the joints being arranged so that the limb could not be quite brought into normal extension. A weak accumulator was placed behind, to enable the flexors to overcome the extensors. Under this treatment the muscular spasm subsided, the ligaments became firmer, the tendency to hyper-extension disappeared, and the muscles gained in strength, so that only slight excess of mobility and some weakness persist. Mr. Godlee stated that such cases were very rare, the only recorded cases he knew being those related by Mr. Hilton in his lectures on "Rest and Pain": one of Mr. Hilton's, another of Sir Astley Cooper's. Mr. Godlee believed that the crucial ligaments in these cases were neither ruptured nor deficient—simply stretched,—and he advocated the view that the condition is essentially one of spasmodic muscular contraction. In a similar case, which was under the care of Mr. Barwell, the lesion coexisted with talipes equino-varus.—The patient was exhibited, and examined with much interest by the members present.

Dr. GREENFIELD related a case of Hydatid of the Lung, which was cured by evacuation of the cyst through the bronchi. The patient, a girl seventeen years of age, came under his care in March, 1875, suffering from pulmonary symptoms of four years' standing, for which she had been at times under treatment, the symptoms being ascribed to phthisis. When first seen she was complaining of return of cough, expectoration of offensive fluid, and pain in the right side, and she had had slight hæmoptysis. The expectoration had come on suddenly four days previously. The physical signs pointed to a loculated empyema situated towards the lower part of the right lung, which had formed a communication with a bronchus. There were, however, none of the associated symptoms of chronic empyema. Dr. Greenfield proposed to perform paracentesis, but before arrangements could be made the patient, three days later, had a sudden attack of cough, followed by impending suffocation, and then brought up a large piece of hydatid membrane, forming an almost complete cyst, the size of an orange, and then a teaspoonful of blood. She continued to expectorate pieces of membrane for about ten days, and then the physical signs of a large cavity in the region of the angle of the right scapula appeared. There was no subsequent rise of temperature, and the physical signs, with the exception of those indicative of a large cavity, entirely disappeared, the patient making a rapid recovery. Since that time until lately the patient had been in good health, but the signs of a cavity have persisted in a gradually narrowing area, corresponding with the upper part of the lower lobe of the right lung. Recently some indications of fresh enlargement and surrounding inflammation have been observed. Dr. Greenfield remarked that though the occurrence of hydatid cysts in the lungs was comparatively rare, and, according to the authorities, the evacuation and cure of the cyst by perforation into a bronchus still more so, the number of cases recorded probably did not represent the relative frequency of the affection. The diagnosis between hydatid cysts in the lung itself and in the liver perforating the lung, when the cyst is in the lower lobe of the right lung, was in some cases a matter of difficulty; but he relied upon the general course of the symptoms, the position of the cyst as indicated by the physical signs, and especially on the complete evacuation and absence of bile-staining of the membrane. By an analysis of recorded cases, he showed that hydatid cysts of the lung were not most frequently found in the lower lobe of the right lung, but occurred with equal frequency in the upper lobes and in the left lung. The prognosis after complete evacuation of the cyst was generally regarded as favourable, but there was danger of the presence of another cyst, the recurrence of inflammatory changes around the old one, and possibly of the production of aneurism of the pulmonary artery by traction of the contracting cyst-wall or by the loss of resistance due to its presence. The fact that there were some indications of the possible presence of another cyst would lead him to watch the case carefully, and, if necessary, to try the effect of exploratory puncture.—Dr. DUFFIN said that although cases of hydatid disease were of comparatively rare occurrence in this country, they were very frequently met with in some parts of Australia, especially the colony of Victoria. Even in the lung it was found with sufficient frequency to enable the practitioners of that country to diagnose its existence with considerable accuracy. It chiefly simulated phthisis; sometimes the general symptoms would be wonderfully parallel. Dr. Dougald Bird, of Melbourne, had recorded as symptoms of pulmonary hydatid the following general signs: A more or less phthisical-looking cachexia, with progressive loss of flesh, and mucous expectoration, which may or may not be early stained with blood, and which later becomes purulent. He has also seen well developed clubbing of the finger-nails. As the cyst enlarges, hæmoptysis, generally pure, unmixed, arterial, occurs in quantities of from one to three or four ounces repeatedly, although extensive spitting of blood was rare. The hæmoptysis was probably due to pressure on the pulmonary veins; visible venous engorgement was rare, and made a reliable distinction from cancer. As regards the physical diagnosis, Dr. Bird had found such tumours rather more frequently in the right lung. They generally existed about the middle of the lung, although they were also frequently found both at the apex and the base. While still deep in the lung-substance feeble breathing and flattening of the percussion note were the only signs. Later, the globular tumour, with more or less semicircular edges, pushed the lung out of the way, and complete dulness with absence of breathing over it was the result. Dr. Bird, however, found that immediately the clearly defined margin of the cyst was passed, the breath-sounds were at once normal. The signs of ordinary consolidation being absent, those of fluid, sometimes even fluctuation, could be made out. Dr. Bird's experience ranged over from 90 to 100 cases of thoracic hydatids. The treatment he almost universally adopted was early puncture with a very fine trocar, without the use of the aspirator. Even for the purpose of diagnosis the trocar might be used. Dr. Bird had frequently punctured the healthy lung without evil results following.—Dr. CAYLEY observed that there was one fact of great importance in its bearing on the diagnosis—viz., that there was no enlargement or depression of the liver, which would have almost certainly occurred if the hydatid had been primarily in that organ. In three cases which he had seen in which an hydatid of the liver had opened into the lung this sign had been present.—A MEMBER referred to the probability that hydatids of the lung would be found more frequently in climates corresponding to that of Victoria.—Dr. BUZZARD said that he, like Dr. Duffin, knew Dr. Bird well, and had read his paper, from which Dr. Duffin had quoted. One omission in that pamphlet had struck him—viz., there was no statement as to the number of cases of hydatid of the lung unassociated with that of the liver, nor as to the relative frequency of hydatids in the lung and liver. He thought that there was no advantage in employing the aspirator in early puncture, a long trocar being quite sufficient. In some cases the aspirator had caused the cyst to rupture into and choke up a bronchus.—Dr. COUPLAND referred to an exhaustive pamphlet by Dr. A. W. Hearn, of Paris, on the subject of hydatid of the lung. He was led to inquire into the subject by a case diagnosed as phthisis, in which sudden rupture of the cyst caused death by blocking up the bronchus. Dr. Coupland suggested the employment of electrolysis, as proposed by Dr. Hilton Fagge and Mr. Cooper Forster, for hydatid of the liver.—Dr. GREENHOW said that the case must be one of great rarity; he had himself never seen a case. There could be no doubt that it was a case of hydatid of the lung itself, but he did not think this proved by the absence of bile-staining of the membrane expectorated. Some years ago he had a case in which a large hydatid cyst of the liver in a girl was tapped and apparently cured. Some time later, however, pulmonary symptoms, simulating phthisis, came on; hæmoptysis occurred, and pieces of white membrane were expectorated, and recovery ensued. Very important points in the diagnosis were the existence of the area of resonance below the dulness, and the limitation of the dulness. He would be inclined to early puncture of the lung in such a case.—Mr. MAUNDER said that as the physicians who had spoken regarded the subject rare, and as he had come there to be confirmed, or otherwise, in his belief concerning the cause of death of a member of the profession, the late Dr. Day Goss, he would occupy their time for a moment. The diagnosis had been spoken of as difficult, but after listening to Dr. Greenfield's very exhaustive paper, and to the remarks of Dr. Duffin, he felt confident that Dr. Day Goss had been the subject of hydatids of the right lung. He detailed the symptoms in support of his opinion, but as Dr. Day Goss had died 200 miles from London, he had not had the opportunity of making a post-mortem examination.—Mr. CALLENDER observed that, though he had not seen a case of hydatid of the lung, he had removed one from the pleural cavity. He was asked to operate for empyema, and on making the incision the cyst presented, and was drawn out entire. Judging from its size, it must have filled up the whole chest cavity. The patient completely recovered, and now (six or seven years after the operation) is quite well. He would ask whether Dr. Bird gave any explanation of the occurrence of hæmoptysis in these cases, and also whether there was any actual statement of facts as to the side most commonly affected.—Dr. DUFFIN, in reply to these questions, stated that, in Dr. Bird's own experience the majority occurred on the right side. Dr. Bird ascribed the hæmoptysis to laceration of the pulmonary tissue by the expansion of the cyst.—Dr. GREENFIELD, in reply, regretted that he had been unable to procure Dr. Bird's original pamphlet. Some misconception

appeared to prevail as to the frequency of occurrence of hydatids of the lung in comparison with those of the liver. The latter organ was by far the most commonly affected, even where the former affection was prevalent. He observed, too, that it appeared to be only in the colony of Victoria that the disease was common, and not in other parts of Australia. As to the diagnosis of hydatid of the liver, he could not fully agree with Dr. Cayley as to the importance of depression of the liver, as he had seen cases where the cyst in the liver was of very large size, pushing the diaphragm upwards, and yet little or no depression of the liver occurred; this probably depended upon the situation of the cyst. Respecting the bile-staining of the membrane expectorated in cases of liver hydatid, he believed that this was an almost invariable rule, his own experience in this respect corresponding with the statements made by Bird, Bristowe, and other writers on the subject. Probably inflammation of the surrounding liver-tissue always preceded and caused the perforation, and some bile became mixed with the fluid. Dr. Greenhow's case might be explained by the presence of a cyst in the lung as well as that in the liver, several such cases being on record. But of equal diagnostic importance, he believed, was the evacuation of the cyst almost entire, which could hardly occur if from the liver. On the subject of treatment, he thought that early puncture with a fine hollow needle was unquestionably advisable; and he referred to recent experiments by Dr. Stone on the tension of cysts as showing that probably an aspirator would not be required, the pressure in the cyst itself being sufficient to cause an outflow of the fluid.

Mr. A. TREHERNE NORTON related a case of Aneurism of the Popliteal Artery treated by ligature of the femoral with carbolised catgut; recovery; subsequent death of the patient from embolism of the basilar artery. The patient, a man about forty years of age, came under his care in St. Mary's Hospital, suffering from a small aneurism of the popliteal artery. Other means of treatment proving ineffectual, compression by a tourniquet applied to the femoral artery was tried, but the pressure could not be maintained owing to the pain which it caused the patient. Ligature of the femoral became therefore necessary, and the artery was tied in the usual position in Scarpa's triangle, with carbolised catgut, one end of which was cut off short, the other left projecting outside the wound in order to serve as a means of drainage. Carbolised oil and other antiseptic precautions were employed, but neither the carbolised spray nor gauze. Mr. Norton stated that he was led to employ this method of treating the ligature in order to allow of the exit of pus in case any inflammatory reaction occurred, and thus to prevent the diffusion or the extension of inflammation along the femoral vein, one of the chief dangers to be avoided. Slight febrile reaction followed the operation, but there were no unfavourable symptoms, and the wound speedily healed, leaving only a minute track along the ligature, through which a few drops of pus could be squeezed out. The free end of the ligature was drawn out on the fifth day after the operation, the knot remaining. Six days later pulsation at the ankle was distinct. About twelve days after the operation, the patient suddenly became pale, and then unconscious for a few seconds, then rallied and spoke, again became unconscious, and died only a few minutes after the first seizure. At the post-mortem examination, the cause of death was found to be a clot in the basilar artery, which extended from the right vertebral into the right posterior cerebral, completely filling and distending it. The vessels of the brain were very atheromatous, but the brain was otherwise healthy. Both branches of the pulmonary artery were filled with post-mortem clot. The mitral valve was fringed with vegetations, and thick and calcified. The wound on the thigh had healed; no knot could be found near the vessel, the inner and middle coats of which were divided. The sac of the aneurism was contracted, and filled with clot. Mr. Norton believed that the explanation of the cause of death was the detachment of a vegetation from the mitral valve, causing embolism of the right vertebral artery and the first fit, then that the embolus was carried on into the basilar, cutting off the blood-supply of the pons, and causing sudden death. — In reply to the President, he stated that the femoral vein was normal. The clot in the basilar artery caused the vessel to bulge, but was not adherent to its wall. The coagula in the pulmonary artery were certainly of post-mortem formation. — Mr. THOMAS SMITH inquired whether the ligature had divided the artery, and whether Lister's antiseptic method was used. — Mr. NORTON, in reply, said that only the inner and middle coats were divided. The instruments were treated with carbolised oil. No part of the ligature was discovered in the wound after death. — Mr. GODLEE suggested that if it were desirable to have drainage in the wound, it was scarcely an advantage to have the drainage-tube attached to the artery; the same result might equally well, and with less risk, be accomplished by a piece of ligature or a drainage-tube simply left in the wound.—Dr. BARLOW observed that embolism of the basilar artery was very rare, and he would require some proof that the clot was not due to thrombosis in an atheromatous artery; that view could be more easily accepted. — Dr. GOODHART inquired what was the condition of the femoral artery; and suggested that the popliteal aneurism might have been due to embolism, although the patient was forty years old, beyond the age at which aneurism from embolism was believed to occur.—Dr. COUPLAND inquired whether any proof of embolism could be found in other organs; there would probably be some in the spleen or kidneys also if due to detached mitral vegetations. — Dr. GREENFIELD also thought that the conditions discovered after death were more consistent with thrombosis than with embolism. The only cases of obstruction of the basilar artery by clot which he had seen had been due to thrombosis in a diseased artery, and in nearly all it was associated with syphilis. The bulging of the vessel by the clot seemed to exclude embolism. He inquired whether any thrombosis existed in the left auricular appendix. — Dr. DUFFIN related a case of thrombosis in the basilar artery in which the chief characters were the rapid supervention of coma, contraction of the pupils, and extreme rapidity of respiration, which varied from 75 to 105 per minute. The man lived twenty-two hours from the supervention of the symptoms.— Dr. GLOVER inquired what was the condition of the artery which preceded the thrombosis.—Dr. DUFFIN replied that the vessel was much degenerated and thickened, that there were extensive coexisting syphilitic visceral lesions, but he could not say what was the precise nature of the changes in the vessel.—Mr. THOMAS SMITH, returning to the subject of the application of the carbolised catgut ligature to a large artery, raised a question as to the stability of the ligature. In five days, in Mr. Norton's case, the ligature ceased to act in constricting the artery, and the post-mortem showed that all the coats were not divided, as when the ordinary ligature was employed. The subject was therefore one of great surgical interest. He himself believed that the carbolised catgut is not trustworthy in ligaturing a large artery; his own experience, and, he believed, Mr. Callender's also, had been unfavourable; the pulsation in the vessel returned forty-eight hours after the ligature. In a recent case of ligature of the femoral for popliteal aneurism, where the ligature had been sent him with special precautions by Mr. Lister himself, and all his antiseptic measures were used, the pulsation returned within forty-eight hours; the wound healed. The only result of the ligature was the formation of a small aneurism at the seat of ligature, owing to weakening of the wall of the vessel, the outer coat not having been divided.—Mr. NORTON, in reply, said that the right auricular appendix was not examined. The basilar artery was very atheromatous, but there was no thickening beyond the clot, which could be moved in the vessel.

The meeting then adjourned.

BEQUESTS &c. TO MEDICAL CHARITIES. — Mr. William Cobb bequeathed £500 to the Royal Infirmary, Dundee. Mr. T. Dyer Edwardes has given £300 to the Building Fund of the proposed new Hospital for Women, Chelsea, being his third donation. Mr. John Habgood, of Birmingham, bequeathed £200 to the General Hospital, £100 to the Queen's Hospital, £50 to the Dispensary, and £50 to the Eye Hospital, all at Birmingham; and £50 to the Royal Medical Benevolent College, Epsom. Lord Ongley bequeathed £500 to the Bedford Infirmary. The Sheffield Public Hospital and Dispensary has received £500 from "A Clergyman," and £100 under the will of Mr. Peter Spooner. The Eye Infirmary, Brighton, has received £100 under the will of Mr. C. Newbold.

Reviews and Notices of Books.

An Atlas of Topographical Anatomy after Plane Sections of Frozen Bodies. By WILHELM BRAUNE, Professor of Anatomy in the University of Leipzig. Translated by EDWARD BELLAMY, F.R.C.S., Senior Assistant Surgeon to the Charing-cross Hospital, &c. &c. London: J. and A. Churchill. 1877.

THE study of descriptive anatomy has been as assiduously cultivated of late years in Great Britain as on the Continent, and with the magnificent cyclopædia of Todd, and the excellent text-books of Quain, Gray, and Wilson, our students have had every facility for making themselves masters of anatomical science from this standpoint. For the study of topographical anatomy, the manuals of dissection by Ellis, Holden, Heath, and Cleland have been the only guides, and admirably adapted as they are for mere dissecting-room purposes, they have necessarily done little or nothing to teach us applied anatomy, the exact positions and relations of structures to one another, and to the surface of the body, as definitely determined by the method of plane sections. Such a knowledge is imperative to both the surgeon and physician, and it has been a matter of much regret and surprise to us that no English work has been produced which has even attempted to cover this ground. Teachers and students who were versed in foreign literature were well acquainted with Pirogoff's Atlas, Legendre's Anatomie Chirurgicale Homalographique, and Braune's large Atlas; but not one even of these has been reproduced or popularised in this country. Prof. Braune's smaller Atlas is the most recent and popular text-book of topographical anatomy in Germany, and we hail with great pleasure the appearance of its English translation. It will speedily be found in the hands of every advanced anatomical student, and is absolutely indispensable to the anatomical teacher and to every surgeon, whether in military or civil practice. The English version is as good as, if not better than, the original work, for the translation is extremely well done by Mr. Bellamy, who has exercised a wise judgment in giving a most readable interpretation of the text, instead of following the author too literally. We are especially glad to find that he has omitted some irrelevant matter, to which the plates do not refer, and which would only have been unintelligible to, and have wearied, the English reader.

Thirty-four photographs reduced to half-scale from the larger Atlas, and forty-six woodcuts in the text, present us with faithful representations of almost every possible vertical and transverse section of the trunk and limbs, and in the last three plates we are even shown sections of the pregnant female with the fœtus *in situ*.

A study of this Atlas will correct many important errors which have been perpetuated in successive editions of some of our text-books. We would especially invite the attention of writers on anatomy to the position of the epiglottis, cricoid cartilage, arch of the aorta, and transverse colon. The relative level of large and important structures such as these is given wrongly in many of our every-day works, and frequently passes uncorrected by both teacher and examiner. That important mistakes in military surgery must happen in consequence is very obvious, even if the results of such false anatomy are less apparent because less frequently put on trial in civil practice. The position of the heart and lungs, as ascertained by Braune, accords very closely with the accounts given both by Luschka and Pirogoff, and these have been followed in most of our recent works, so that they are sufficiently familiar. For paracentesis pericardii the author recommends "the *upper* angle between the left edge of the sternum and the fifth costal cartilage"; and his remarks on the relation of the descending colon to the peritoneum and to the quadratus lumborum are important now that colotomy is so often performed.

Finally, we must add that nothing more could be desired in the clearness of the type or in the distinctness and beauty of the plates, and we look upon this book as one of the most valuable that has been issued by Messrs. Churchill in late years.

The Journal of Anatomy and Physiology. Vol. XI. Part II. January, 1877. London: Macmillan and Co.

THIS number contains no less than fourteen articles, some of which are of considerable interest. They are as follows: 1. The Spinal Nervous System of the Porpoise and Dolphin; by Dr. Cunningham. 2. Notes of a Case of Double Aortic Arch; by Dr. Watson. 3. On the Action of Vanadium upon the Intrinsic Nervous Mechanism of the Frog's Heart; by Prof. A. Gamgee and Leopold Larmuth. 4. On the Poisonous Activity of Vanadium in Ortho-, Meta-, and Pyro-Vanadic Acids; by Leopold Larmuth. 5. On the Difference in the Poisonous Activity of Phosphorus in Ortho-, Meta-, and Pyro-Phosphoric Acids; by Prof. A. Gamgee, John Priestley, and Leopold Larmuth. 6. On the Action of Pyro-Phosphoric Acid on the Circulation; by Prof. A. Gamgee, John Priestley, and Leopold Larmuth. 7. Observations on the Physiological Action of Chromium; by John Priestley. 8. Case of Univentricular or Tricoelian Heart; by Dr. Elliot. 9. On the Changes in the Circulation which are induced when the Blood is expelled from the Limbs by Esmarch's Method; by H. G. Brooke and E. O. Hopwood. 10. On the Effects of Sulphate of Atropia on the Nervous System of Frogs; by Dr. Ringer and William Murrell. 11. A Contribution to the History of Development of the Guinea-pig; by E. A. Schäfer. 12. On the Physiology of the Dehiscence of the Fruit of Momordica Elaterium; by Charles J. F. Yule. 13. Note on Case of Atrophy of Right Hemisphere of Cerebrum, Left Cerebellum, &c.; by H. A. Chatham Gray. 14. Note on the Lobules and the Connective Tissue of the Camel's Liver; by Prof. Turner.

Messrs. Brooke and Hopwood show in an interesting manner that the application of an Esmarch's bandage to the lower limbs practically expels nearly the whole of the blood and lymph from the compressed part, the effect of which is to increase temporarily the relative pressure on the right side of the heart and augment the frequency of its beats, whilst the removal of the bandage, owing to the presence of the valves in the veins, suddenly, but again of course only temporarily, increases the pressure in the arteries, which has also for its result acceleration of the heart's beats. In regard to the poisonous action of vanadium, Prof. Gamgee and Mr. Larmuth appear to have shown that it is chiefly due to its action as a poison of the contractile tissue, though it may also influence the nervous mechanism of the organ. They have discovered the curious fact that whilst sodium orthophosphate is a substance possessing no activity as a poison, the metaphosphate is undoubtedly poisonous, and the pyrophosphate still more so; and this they attribute to a double action of the pyrophosphate, partly on the muscular tissue, and partly on the cardiac nervous mechanism. Dr. Schäfer's paper deals with the development of, and the changes in, the primitive groove and allantoid region of the ovum of the guinea-pig.

Du Diabète Phosphatique. Par le Dr. L. G. TEISSIER. Paris: T. B. Baillière. 1876.

THIS is an interesting treatise, founded on careful research into the conditions underlying excessive excretion of phosphates in the urine. The main facts upon which the treatise is based were published in 1875, and referred to in our pages at the time (see THE LANCET, vol. ii. 1875, p. 537); but the author has considerably extended their

scope, and has produced a really creditable and instructive essay upon a somewhat neglected subject. He recognises four varieties of "phosphaturia"—viz., that accompanying diseases of the nervous system, that associated with or even preceding the development of pulmonary phthisis; thirdly, cases in which excessive excretion of phosphates proceeds *pari passu* with glycosuria, or even replaces this; and finally, those cases to which the name "phosphatic diabetes" strictly applies. It is interesting to note the resemblance between the symptoms in the latter group of cases—of simply excessive production of phosphates—and those of saccharine diabetes, even to the tendency of the former to produce cataract, and to complicate other surgical affections. The book consists of two parts, the first being devoted to the clinical, pathological, and therapeutical aspects of the condition; and the second dealing with the methods of analysis and with the chemico-physiological questions involved in normal and morbid excretion of phosphates. The essay is well worthy of perusal, and we opine that many who read it will be able to recall cases of obscure nature readily explicable upon the views here laid down.

Journal of a Residence at Vienna and Berlin in the eventful Winter of 1805–6. By the late HENRY REEVE, M.D. Published by his Son. London: Longmans.

DR. REEVE, the writer of these notes, was an English physician whose fortune it was to see much of the prominent figures in the stirring epoch in which were wrought the downfall of Austria and the humiliation of Russia. He saw the great military captain of the age on the morrow of Austerlitz flushed with glory and success; he conversed with Haydn and Beethoven; heard Humboldt describe his travels and researches, and Fichte lecture on philosophy, and became acquainted with a number of persons of note in Germany with the lives of many of whom the world is now tolerably familiar. The Journal, which displays a keen insight into human nature, was written spontaneously, and without a thought that it would ever see the light, and, like the Diaries of Pepys and Evelyn, presents moving pictures of contemporary life with a vividness never attained in the most laboured periods of the historian. Dr. Reeve's Journal is decidedly readable, and, what is of no small consequence now-a-days, is extremely well got-up as regards type and paper. One fault, however, we must point out, and that is the rather slipshod manner in which it has been edited.

Winds of Doctrine. By CHARLES ELAM, M.D. London: Smith and Elder. 1876.

IN the preface to this little book Dr. Elam states that the essays it contains are offered with the intention of showing that "those purely physical theories of life and mind that have of late years been promulgated on high authority, and with unhesitating confidence, and have obtained such extensive credence even amongst thoughtful men, are simply unreliable and unscientific, and are exercising a mischievous and benumbing influence in every domain of thought." With the latter part of this sentence we can hardly agree, for if ever there was a time when thought was active and speculation far-reaching it is the present. We think Dr. Elam scarcely gives due weight to the admission on all hands that the doctrine of evolution, of descent with modification by natural selection, and others he discusses, are only taken as the best working hypotheses consistent with modern knowledge. Many objections may be advanced against each of them, but something more is required from a writer who aims at overthrowing them. Can he supply better? Dr. Elam makes no attempt to do so in these pages. They are, however, written with much brilliancy and considerable vigour and acuteness.

THE SMALL-POX EPIDEMIC.

DURING the week ending Feb. 24th the fatal cases of small-pox showed a decline from the numbers returned in recent weeks in Liverpool and in Manchester and Salford, whereas a marked increase occurred in London. One death was referred to this disease in Oldham, while not one was recorded in any of the other fifteen of the largest English towns.

The fatal cases in London, which had in the three preceding weeks successively declined from 103 to 90 and 72, rose again to 104 last week, which was, with but one exception, the highest weekly number recorded during the present epidemic. Of these 104 small-pox deaths, 41 occurred in the Metropolitan Asylum Hospitals, 5 in the Highgate Small-pox Hospital, 1 in the Model Prison at Holloway, and 1 in the North-street Infirmary (Poplar); the remaining 56, or 54 per cent. of the total cases, occurred in private dwellings, under circumstances which will almost inevitably cause them to become so many fresh centres of infection. Distributing the hospital cases, it appears that 11 of the deceased small-pox patients had resided in Bow, 11 in Southwark, 6 in Poplar, 6 in Hackney, and 5 in Marylebone; excluding 2 suburban cases in hospital, 6 belonged to the west, 20 to the north, 4 to the central, 29 to the east, and 43 to the south groups of districts. North and South London showed the largest increase of fatal cases during the week, but the disease again showed the largest proportional fatality in the east districts, especially in Bow and Poplar, which have contributed no less than 52 and 43 deaths respectively out of the 750 registered in the metropolis during the first eight weeks of this year.

The 104 deaths from small-pox in London included 42 certified as unvaccinated and 25 as vaccinated. In the remaining 37 cases, the medical certificates did not furnish any information as to vaccination, or contained statements that the medical practitioners were unable to certify whether the deceased had or had not been vaccinated. Among the 42 fatal cases certified to be unvaccinated, 16 were of children under five years of age; 1 was of a woman aged twenty-three years, described as the "daughter of a M.D." It would be interesting to know whether it was carelessness or prejudice which caused the death of this physician's daughter through neglect of vaccination.

The Metropolitan Asylums Small-pox Hospitals contained 916 patients on 24th ultimo, of whom 112 were convalescents in the Limehouse Hospital; at the end of the two previous weeks the numbers were 811 and 901. The number of new cases admitted to these hospitals during the week was 202, against 194 and 238 in the two preceding weeks. So long as the admissions average 200 a week, and so long as more than half the cases are allowed to be treated in the crowded rooms of the poor, it will be vain to look for a real decline in the weekly number of deaths from small-pox. The epidemic may die out of itself, but it should be thoroughly understood that its continuance is not to be attributed to the failure of sanitation, but rather to the want of faith in sanitation, which has led to the neglect of its teachings. The present epidemic does not afford any argument against the value of isolation and vaccination, for these precautions have either been ignored or neglected. Take Bow and Poplar, for instance, where the disease has been recently most fatally prevalent. Of the 17 deaths registered during the week ending 24th ultimo, only 4 occurred in hospitals, the other 13 being recorded in the houses inhabited by the working classes in those crowded districts. As regards vaccination, 6 were certified to be unvaccinated, 4 were certified to be vaccinated, and the other 7 were not stated as to vaccination. No less than 10 of the 17 fatal cases were of children under ten years, including 9 aged less than six years; proving conclusively the neglect of vaccination in these eastern parishes.

It will indeed be strange if the apathy and inaction of the metropolitan sanitary authorities and of the Poor-law guardians—who, by a curious anomaly, are still responsible for vaccination—which has so materially contributed to the present disastrous small-pox epidemic, does not lead to a radical reform in the sanitary organisation of London.

THE LANCET.

LONDON: SATURDAY, MARCH 3, 1877.

THE appearance of a memorial of the Fellows to the Council of the Royal College of Surgeons of England respecting the recent alterations in the regulations relating to the education and examination of candidates for the diploma of Fellow is eminently satisfactory, if for no other reason than that it shows that the Fellows have at length been roused to take some interest in the affairs of their College. It was difficult to conceive that the new regulations would be accepted without some show of opposition, and on several occasions last year we pointed out some of the evils that would be likely to attend the adoption of the proposed alterations. Few persons, however, seemed to understand the significance of the changes, and fewer still took the trouble to try to understand them. Even those gentlemen comprising the committee appointed to consider and report to the Council on the regulations were apparently, with one or two exceptions, quite indifferent, and as at least one member of the committee was interested in obtaining the alterations, the task of persuading his colleagues to accede was not difficult. Indeed, it was so easy that the first report which the committee presented was so flagrant and so revolutionary that even the Council rejected it almost without discussion, and at once referred it to the committee for fresh consideration. By contrast the second report seemed tolerable, and it was accordingly accepted by the Council on April 13th last. On Dec. 14th last the Council agreed to the changes in the bye-laws, standing rules, and regulations which the conditions of the report necessitated. But in doing so the Council evidently overlooked the injustice they were doing to every existing Fellow of the College, especially to the juniors.

If the new regulations are allowed to come into operation, any member of the College who is twenty-five years of age, and who can produce evidence of having been engaged six years in the study, or study and practice, of his profession, is admissible to the professional examination for the diploma of Fellow, no matter how or where the six years have been spent. For such persons no extra higher preliminary examination is necessary—no knowledge of French, or of German, or of Greek; a third year's dissection, a course of lectures on comparative anatomy, a course of operative surgery, two additional years devoted to hospital practice—in fact, all the extra requirements of the six years' curriculum,—are abolished. On the other hand, if a member is content to wait until he has been a member for ten years, he will be able to obtain the Fellowship on very easy terms, almost without examination at all, and with at most two months' reading. Thus a Member may, at the age of thirty-one, obtain the Fellowship without any more study than that required for the Membership. Such a concession is not only a breach of faith with every Fellow who, at great cost of labour, time, and money, has complied with the old regulations, but it is calculated to lower the state of surgical education and practice in this country, and also to deteriorate the value of the diploma itself. The merit and distinction that have hitherto belonged to the diploma of Fellow will of necessity lapse if three different classes of Fellows are created. The stimulus to the deeper and more extended study of human and comparative anatomy and physiology will be withdrawn, and the advantage of a six years' scientific and practical training in surgery will, sooner or later, give place to mere book-learning and the recollection of dry, unproductive facts.

For these reasons, and for others that need not at present be discussed, we hope that the influence of those who have undertaken the management of the memorial will prevail with the Council, and that the Council itself may have the good sense to see the impropriety and the injustice of the new regulations.

THE preservation of articles of food, and especially of vegetables and fruits, in tins hermetically sealed, is a procedure worthy of all commendation and encouragement from a commercial, economical, and still more from a hygienic, point of view. The movements of the manufacturers of such articles ought therefore (to use a phrase which MR. GLADSTONE has applied to Russia) to be "jealously and severely watched," and, if they tend to throw suspicion on the wholesomeness of this class of products, to be visited with severe censure.

Our readers will see at once that our remarks have reference to the case which they will find reported in most daily papers—a case tried by Mr. KNOX at Marlborough-street Police-court, and, as we think justly, decided against the defendant, WILLIAM LINGNER, one of a group of foreign provision dealers against whom summonses had been taken out, at the instance of the Strand Board of Works, for selling French preserved peas containing copper. In an earlier case, in which conflicting evidence was given, the official analyst to the Union had found 0·56 grain of metallic copper, and the Government analyst 0·23; but in the present case the analyst to the Union had found 0·88 of a grain. These quantities of metallic copper multiplied by four give a close approximation to the quantity of sulphate of copper. The tins, therefore, contained a quantity of a salt of copper represented by the sulphate varying from somewhat less than one grain to about three grains and a half, and the question propounded to the skilled witnesses who appeared on behalf of the Strand Board of Works was whether this larger quantity found in the tin of peas purchased from the defendant might prove injurious to health. The witnesses were unanimous in thinking that it might, especially in persons of feeble health or nervous temperament, and in those who are peculiarly susceptible of the action of poisons. They did not allege that a single dose of a grain or so of copper would produce symptoms of poisoning recognisable as such either by the person himself or by a medical man, but that such doses could not be repeated with impunity. Such an opinion must needs be an inference from the known facts relating to poisons generally and to copper in particular. It is not to be justified by such answers as the questions of counsel would elicit, but by

carefully-considered written statements, placing facts and inferences in logical order. It is, therefore, greatly to be regretted that, in legislating upon such matters, the Government does not first ascertain what, in the opinion of the highest authorities, are to be regarded as substances injurious to health, and then forbid their use in articles of food under heavy penalties. Such a procedure would shut out useless and expensive litigation, and restrict to their proper sphere—the organs of literature and science—those expressions of difference of opinion between experts which, in our profession more than in any other, tend to throw discredit both on our knowledge and honesty.

As to the question whether copper in small doses is to be regarded as a chronic poison, of which the use ought to be interdicted, that can only be answered by a reference to cases justifying the admission of copper and its salts into the class of metallic poisons, on the strength of its violent action in acute cases; to other cases proving that it acts poisonously when swallowed or otherwise introduced into the body gradually and in small quantities; and by the analogy arising out of its employment in medicine in small doses.

Our readers will find some new contributions to our knowledge of copper-poisoning, and to other matters of interest, in a letter from Dr. GUY, to which we give insertion.

There is one obvious consideration arising out of this subject which we must not omit to notice. M. BRIANT, the Parisian manufacturer of coppered peas, may so conduct his operations that the salt of copper shall not exceed some such quantity as three grains and a half in a tin. But what, we ask, is to prevent some rival manufacturer from adopting some process by which the quantity of the poisonous salt shall be largely increased? or what if the quantity of copper required to act as a mordant to retain the green tint so dear to the epicure should chance to vary inconveniently with the kind and quality of the pea? And if copper is to be tolerated in peas for the sake of their colour, what is to exclude it from other vegetables and fruits which may happen to possess still higher absorbent power?

THE anomalous nature of the Vaccination Laws of Ireland constitutes a public scandal. It will be almost incredible to English readers that points which are held to be essential to the successful administration of public vaccination in this country, and which, if the authoritative teachings of the principal exponents of vaccination here go for anything, are cardinal to an efficient administration, have no place in the vaccination laws of Ireland. Here we pride ourselves on having rendered vaccination compulsory in early infancy, and also on having given certainty to arm-to-arm vaccination by making it necessary for the parents of a child vaccinated at the public cost to produce that child to the vaccinator on the eighth day, and suffer him to take lymph from the vesicles. Further, we offer inducements to the public vaccinator to do his work well, first by a reasonable fee for performing the operation, and next by a system of pecuniary awards for its efficient performance. Again, we have so carefully an adjusted system of registration of results, that it is possible to account, if due diligence be exercised, for the vaccination, or the cause of non-vaccination, of every child born. Now with regard to these several things, each of which we believe to be essential to the successful prosecution of vaccination, both private and public, among a community, the vaccination laws of Ireland fail more or less completely.

And, first, the vaccination laws of Ireland require the child to be vaccinatd within six months of birth, and not three, as here. If it be needful to show the disastrous consequences, when small-pox becomes epidemic, of prolonging to six months the period within which vaccination may be performed, we would refer to Dr. SEATON'S report on the epidemic of 1870–71. Next, in Ireland it is optional with the parents of a vaccinated child whether or not the child be taken to the public vaccinator for inspection and removal of lymph on the eighth day, the all-important question of the maintenance of the lymph-supply being thus left largely at the mercy of the careless, the ignorant, and the prejudiced. Then, for performing a like operation in communities among which vaccination is of not less public as well as individual importance than in this country, the public vaccinator in Ireland is paid a maximum fee of one shilling, as against a minimum fee of one shilling and sixpence here, and he receives no additional pecuniary allowance in the shape of award for good work, as is the case in England. The awards given for high-class vaccination in England in 1875 exceeded in the aggregate £15,000.

The one institution that the public vaccinators in Ireland and medical practitioners there generally have to fall back upon for renewals of their supply of lymph, the Dublin Cowpock Institution, is dealt with in a like niggardly fashion. The Government contributes to this excellent institution £400 a year, the remainder of its funds being derived from voluntary subscriptions. Now the National Vaccine Establishment in England is supported wholly by an annual Parliamentary grant, which amounts to £10,000.

Contrasts not less glaring are found in the administrative details of the vaccination laws of Ireland as compared with those of England, and without exception to the disadvantage of Ireland. It is to the infinite credit of the public vaccinators of Ireland that, notwithstanding the difficulties with which they have to contend, arising from imperfect laws and from the scandalously insufficient payment they receive, they have done so much excellent work. But it is discreditable to the Legislature that the efficiency of public vaccination of the sister isle should be allowed to depend, as at present, more upon the honourable feeling of a struggling profession than upon properly adapted laws and a sufficient remuneration for the just execution of a public work. It is probable that this question will come early before Parliament in the present session. The Council of the Irish Medical Association have taken it up and drafted two Bills on the subject, one consolidating and amending the vaccination laws of Ireland, the other (in view of consolidation being held undesirable) amending only. These Bills are accompanied by a series of observations, addressed to Sir M. C. H. BEACH, the Chief Secretary of Ireland, on the proposed changes, prepared by Dr. A. O. SPEEDY. These observations, ably and clearly written, present in a concise form the deficiencies of the existing vaccination laws of Ireland, and describe the modes in which it is sought, in the Bills, that they should be remedied. The

propositions throughout are so reasonable that we trust they will meet with the support of the Chief Secretary and be brought before Parliament in a way likely to ensure their acceptance.

A VALUABLE paper, containing the results of numerous careful dissections of the perineum, appears in the last number of M. CHARLES ROBIN'S "Journal de l'Anatomie," by M. CADIAT. He observes that the descriptions given by various writers of the so-called muscles of WILSON and GUTHRIE, and of the external and internal sphincters of the bladder, are very discrepant and confused, which arises, in part at least, from the circumstance that the striped and unstriated muscles were run into one another, and are distinguished with difficulty by coarse dissection. To overcome this difficulty M. CADIAT has adopted a plan he employed when working in conjunction with M. ROBIN on mucous membranes, and which consists in making microscopic sections of the perineum of new-born infants. He has thus been able to obtain longitudinal sections of the urethra from the bladder to the root of the penis and extending backwards to the anus, and by superimposing these several sections ideally, he has acquired a very accurate conception of the position and attachments of the structures in question. Speaking broadly, he has arrived at the somewhat startling results that there is nothing corresponding precisely to either WILSON'S or GUTHRIE'S muscles, and that all the muscular fibres included under these names may properly be termed constrictors of the urethra, and are disposed in a very simple manner, which he proceeds to describe as follows.

The sphincter apparatus of the urethra forms a kind of muscular funnel, which is directly continuous with the circular fibres of the bladder and extends as far as the bulb. At certain points, however, it is modified partly by the interposition of the prostate and bulb itself, and partly in consequence of striated fibres taking the place of smooth muscular tissue. He does not admit that, external to this circular layer, there are any extrinsic muscles extending from the urethra to adjoining parts, corresponding to the muscular bands named after WILSON and GUTHRIE, though we believe the credit of describing the latter set should be assigned rather to Mr. HANCOCK than to Mr. GUTHRIE. As might be expected, the circular fibres which surround that portion of the urethra which is in immediate contiguity to the bladder are composed of unstriated muscular fibres, but in the membranous portion these are replaced by striated fibres, and it is to particular parts of this striated annulus that the above special names have been given. In the female there is nothing more, the parts being reduced to their greatest simplicity, but in the male the presence of the prostate gland interferes with this simplicity. The inferior part is first observed to be broken up by the interposition of large arteries for the supply of the bulb (the veins occupying a lateral position). A little further on the erectile tissue itself is found between the muscular fibres. On still following the inferior wall of the urethra a point is arrived at where it is no longer completely invested by muscular tissue. This is only found on the upper wall, where it appears in transverse sections in the form of the gable end of a house, and it is this part which has received the name of WILSON'S muscle. It thus appears that the urethra, from the neck of the bladder to the bulb, is embraced by a cylinder of muscular fibres, part of which are striated and part smooth; in many parts these elements are intermingled. The smooth fibres occupy the upper part and the neck of the bladder, and the prostate is intercalated between them. In the female, owing to the absence of this gland, the muscular cylinder is continuous. The striated fibres form a kind of case, bevelled off at the two extremities. These two extremities are on the upper part of the urethra, the floor of the urethra presenting very few striated fibres. This muscular case posteriorly invests part of the superior surface of the prostate, whilst anteriorly it projects slightly beyond the plane of the triangular ligament.

In the perineum, and between the sphincter urethræ and sphincter ani, there is a kind of muscular band, the fibres of which run in a transverse direction. These fibres are inserted into the median raphé, and externally into the cellular fasciculi belonging to the connective tissue of the pelvis, or of the subcutaneous layer, according to the depth at which they lie, and some form what is termed the deep transverse muscle, whilst others form the superficial transverse muscle, and yet others belong to the bulbo-cavernosus. M. CADIAT is careful to point out that none of these fibres are capable of effecting an arrest of the venous circulation of the penis, and certainly do not, as was once supposed, aid in producing erection.

Annotations.

"Ne quid nimis."

THE FRENCH MEDICAL BILL.

MR. BOURKE'S reply to the very important questions of Dr. Lush will be found in another part of THE LANCET, and shows how serious is the position of the subject of the international recognition of diplomas as between England and France. The Government appears to be alive to the hardship that will accrue to British invalids in France if the Bill now before the French Chamber of Deputies become law. So does the French Government, which may well be concerned further at the injury that such a law would cause to the health resorts of the South of France. Mr. Bourke's reply is unsatisfactory in one respect. He says that a suggestion for the settlement of the question has been made by the Medical Council of Education. The Medical Council has not sat since this question arose. Any suggestion that may have been forwarded to the French Government must have been made merely by the Executive Committee of the Council. And, with all deference to that Committee, we cannot recognise the propriety of its undertaking the settlement of a question of such importance as this. If such a course is approved by the rest of the Council, we do not think it will be approved by the profession. If the Executive Committee can settle such a difficult and delicate question as this, we do not see why it should not settle any question that comes before the Council. The Council is under very serious engagements this year to deal with the whole subject of professional education and its glaring defects. Though the Council is the Council of Medical Education, and has been nearly twenty years in existence, it has hitherto done nothing to improve the

methods of medical education or to lessen the large number of rejections by the examining bodies. It has made examinations more difficult without making education more efficient. It has now to attempt the latter duty, and the great one for which chiefly it was called into existence. This is quite worth a special session, and might be deferred with advantage to the summer. But such a question as that which is raised by the French Bill is one that will not wait, and upon which the judgment of the whole Council should be taken without delay.

LONDON WATER-SUPPLY.

A STEP in the right direction has been taken by the Metropolitan Board of Works in adopting the report of a committee affirming that the time has come to assume the responsibility of supplying the metropolis with water. The interests of the companies are to be purchased, and application will, if the matter proceeds, be again made to the Legislature for powers to carry out the appropriation. Unfortunately, the parliamentary influence of the companies, coupled with the circumstance that prominent persons are large holders of shares in these corporations, has hitherto proved an insurmountable obstacle to progress. If success for this great and urgent measure is now to be secured, a mode of meeting the opposition must be devised. Would it not be possible to smooth away some of the difficulties by adopting the scheme propounded years ago by Mr. R. H. Patterson—namely, the substitution of public bonds for the shares held by existing proprietors? There would of course be a reduction in value to shareholders, but as money must be raised for the purchase, why not let the present investors be lenders? This would probably meet the views of a considerable body of the proprietors. The security would be unassailable, the payment of interest, which would replace that of dividends, being guaranteed. If the expedient could only in part be adopted the reluctance of proprietors who do not care to be paid out of a lucrative investment might be overcome. It would perhaps be possible to allow a rate of interest on the money at present invested which would be acceptable to the shareholders, and, looking to the conditions of the transfer, the saving which would be effected by the terms proposed, and the money-value of a withdrawal of parliamentary opposition, not unfavourable to the Metropolitan Board. Our interest in the financial question involved is, of course, secondary; but it is only the financial difficulty that now blocks the way.

There are many cogent reasons why the transfer should not be longer delayed. 1. The need of pure water is pressing, and the failure to procure an uniform supply entails serious expense on the community in collateral sanitary measures and precautions. 2. It is abundantly evident that a "constant supply" cannot be obtained from corporations engaged in a purely commercial enterprise, and nothing short of a constant supply in its most liberal sense can meet the needs of the metropolis for domestic and sanitary purposes, with due protection against the contingent risk of fire. 3. The quantity of water required will soon reach 50 gallons per head of the population daily, just double the provision deemed ample thirty years ago, and this supply cannot be obtained and maintained without the construction of works of vast magnitude, which no private company or companies ought to undertake. The development and application of steam power, and increased attention to sanitary precautions against the occurrence and spread of disease in populous districts, render an almost unlimited supply indispensable, and in providing for the present need future requirements cannot wisely be ignored. The earth-crust is the natural filter, and a vast system of artesian wells must, we think, be the final expedient to which those who undertake the responsibility of supplying the wants of a vast and increasing population will need to have recourse, cost what it may. We trust it may be assumed the public enterprise is now fairly under weigh, and that no vested interests will be allowed to retard, much less to obstruct, reasonable progress.

EPILEPSY AND INSANITY.

AN individual may be epileptic, and have fits, without being insane; or he may suffer from epileptic insanity with a scant history, or entire absence, of known convulsive paroxysms. Possibly in this last case the explosions are masked, or take place during sleep. Somewhat the same sort of thing happens when a morbid affection of the nerve-centres or nerve-trunks—disintegrating cells, or disorganising fibres, in a fashion which should, and will, in the end, cause paralysis—reflexly produces mind-symptoms; or, when tubercle deposited in an organ, setting up irritation in the same indirect fashion, develops mental derangement as a collateral phenomenon, which not unfrequently retards or masks the physical disease. To what extent a man affected with epilepsy, which has not previously produced mental disturbance, should be relieved from responsibility because the disease under which he labours *may*, and sometimes does, give rise to mind symptoms, is a moot question. It is, of course, permissible to contend that unless there is actual proof of insanity, its existence ought not to be inferred from the mere fact of a *possible* cause being in existence: just as no one would argue that a phthisical patient was irresponsible, because in certain cases there may be some mysterious relation between tubercular disease and mental derangement. Meanwhile, the convict Treadaway has the benefit of the doubt, and we are heartily glad of it. The bare possibility of hanging a person of unsound mind for a crime committed under the influence of his malady is so terrible that sincere satisfaction must be felt when medical men of high repute and with official responsibility have found it possible to advise, and the Home Secretary has seen the wisdom of according, a reprieve. The case was by no means of a class with that of Gant, in which the murderous attack was characteristic of epileptic fury, or *madness*. Considerable acumen and experience were required for the diagnosis of the mental affection. It is satisfactory to know Dr. Risdon Bennett and Dr. Crichton Browne were pre-eminently fitted for the discharge of this grave duty; the former as a representative general physician, the latter as a scientific and expert alienist, both charged with official responsibility to the State and the profession. The satisfaction with which we view the result is unqualified. It was an occasion on which justice itself required the aid of mercy.

KNIGHTSBRIDGE BARRACKS.

IT is announced that the War Office authorities do not intend to proceed with the reconstruction of the Cavalry Barracks at Knightsbridge; at all events, not at present. The reason assigned for this delay is that the site on which the old building stood is at last found to be insufficient for the purpose, especially as a considerable slice of the already too contracted space will be required by the Board of Works for the purpose of widening the road at the back of the barracks fifteen feet. Several alternative sites are mentioned; the claims of each will no doubt receive due consideration from a military point of view; all we contend for being that the proposed barracks, wherever they may ultimately be erected, shall be built on a site sufficiently spacious to provide wholesome lodging for the men and decent accommodation for their wives and children, and

that the impropriety of allowing a mass of human beings to be herded together over crowded stables and dung-heaps will no longer be permitted. All our public buildings ought to be models of sanitary construction, and in this respect the Government should be careful to set a good example to the rest of the country. Whilst the question of site is still under consideration, we would suggest, if it is considered absolutely necessary to retain the troops in the neighbourhood of the park, that the block of squalid buildings facing the old barracks on the opposite side of the road should be purchased by the War Office authorities, and the new barracks erected there. If this proceeding involved too great an expenditure, there is a site in the park itself admirably suited for the purpose—we mean the rising ground north of the Serpentine, just behind the Humane Society's receiving-house, where, in fact, a guard-house has been in existence for some time. The erection of barracks at this spot would cause no disfigurement to the park—indeed they might be made ornamental; whilst for the men no more eligible site could possibly be selected.

THE ADMINISTRATIVE PROCLIVITIES OF THE BOARD OF TRADE.

IT will be within the recollection of most of our readers that, in consequence of the large number of unregistered as well as unqualified surgeons practising afloat, a Parliamentary return was obtained in June, 1875, of all unregistered surgeons in the British mercantile marine, which contained no less than 224 names. Last year a continuation of the same official return showed 72 additional names, and it was also observed that many of those named in the first return were employed in the latter year. We have many times shown that, in the interest of the public as well as of the profession, it is eminently necessary that all medical men practising afloat, whether in the navy or in the mercantile marine, should be in all respects as well qualified as those ashore. We draw attention to this subject once more, because a rumour has reached us to the effect that the Parliamentary returns above quoted are not likely to be continued, on the ground that it is no part of the duty of the Board of Trade to assist in carrying into effect the provisions of the Medical Registration Act. We confess to having received this information with a considerable amount of astonishment, and trust that Captain Bedford Pim will test its veracity by asking in the House of Commons for a continuation of the returns presented to Parliament in 1875 and 1876. It appears incredible, indeed, that such a reason for inaction should be given by an important Government department. The Admiralty, the War Office, the India Office, and the Local Government Board, all very properly require medical men over whom they have officially, either directly or indirectly, any sort of control, to be registered practitioners, and so, of course, assist in carrying into effect the provisions of an Act passed (as Acts are supposed to be passed) for the public good. Why, then, should the Board of Trade, of all departments, alone shirk, or endeavour to shirk, so palpable a duty, performed as a matter of course by all other State offices? A vast amount of departmental and inspectorial work is done by the Board in order to insure that no master, mate, engineer, or other officer shall proceed to sea in a responsible capacity until he has proved his fitness for the post. Why are medical officers exempted from the operation of this wholesome rule? The Marine Department of the Board of Trade was created, and has been gradually attaining herculean proportions, for the implied (if not expressed) purpose of standing between the public and the shipping interest in order to protect life and property. If surgeons, as well as other officers, have to be carried, the Board is bound to find out to the best of its ability whether they are competent men; and, as the Board, unlike most other leading departments, has no regular medical staff, it would, we should suppose, naturally trust to the Medical Register, this being, in fact, the next best thing to do. But, if reports are correct, the Board is about to throw aside this aid to safety, the practical and lamentable result of which will be again to hand over the care of hundreds and thousands of lives to incompetent doctors. It is not enough to characterise this line of action as an error of judgment. It appears to us to be a palpable breach of duty, and as such to call for active and energetic Parliamentary interference.

THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THE Hospital for Sick Children in Great Ormond-street has recently celebrated the anniversary festival of the twenty-fifth year of its existence, and those connected with it are to be congratulated on the favourable prospects with which, in spite of some drawbacks, the institution enters on the second quarter of a century of its existence. It is not a little astonishing to be told, as we are informed by *The Times*, that it was the first institution of the kind founded in this country. Would those who are fond of making this boast "be surprised to hear" that another Children's Hospital in London is just twenty-five years older, and that the physician who may be said to have founded the Great Ormond-street Hospital, and has done more than anyone else to promote its growth, was first connected with the Royal Infirmary for Children and Women in the Waterloo Bridge-road, and brought to Great Ormond-street the results of over nine years' experience of diseases of children gained at that institution? So much for the facts from which history is made.

The present is a transitional period in the history of the hospital. The new building is as yet incomplete, and circumstances have necessitated the closure of one of the wards for a time, reducing the number of beds to eighty-four. But we are happy to hear that there is a prospect of an increase to 180 at no very distant period, and that the present state is not due to financial embarrassment. There can be no question that there is need for a far larger number of children's hospitals and children's wards in the metropolis. They might, we fancy, be multiplied tenfold, and yet the beds be filled with deserving cases. Nor is the benefit of such institutions confined to the patients. Lord Carnarvon well expressed the feeling of many in his description of the pleasure of entering a children's ward. Nor is the result mere pleasure; it is a moral lesson, if we may so say, and indirectly highly beneficial in showing how much suffering can be relieved by simple means, if rightly used. Mr. Walter, M.P., in a very able speech urged that the benefits of these hospitals ought not to be limited to children of the poorer classes. There can be no question that at present the sick children of the middle, and even the upper classes, are far worse off in a great majority of cases than those of the poor. The sanative influences of air and light, of cheerfulness and hopefulness, and of order and cleanliness can be nowhere so fully obtained as in a hospital. Another truth which Mr. Walter urged was, to use his words: "There was a great moral benefit in patients long associated together in illness, and they were not only encouraged but even shamed into fortitude and patience by the example of those about them." Added to which children are naturally gregarious, and are never so well content as in the company of others.

We have repeatedly advocated the establishment of hospitals for the middle and upper classes, but as yet our representations have been unavailing. We may, perhaps,

hope to see something done in this direction if Mr. Walter will use his influence in the columns of *The Times* in support of some such scheme. And when will some of our larger hospitals take the hint from the prosperity of special institutions for children, and devote more of their attention and space to this important branch of medical science, and to the needs of so large a proportion of our population.

ACCOMMODATION FOR INFECTIOUS DISEASES IN LONDON.

AMONG other business transacted by the Metropolitan Asylums Board, at a meeting held last Saturday, the following recommendations, dealing with the provision of hospital accommodation for patients suffering from infectious disease, not being paupers, were adopted:—1. That such provision could be best made in a comprehensive and systematic manner by one central authority acting for the whole metropolis, not only for pauper patients, but for other classes desirous of hospital accommodation. 2. That such central authority should not be merely a department of Poor-law administration, but should have the powers of the Sanitary Acts conferred upon it. 3. That either the Metropolitan Asylums Board should be merged into such central authority or should itself be that authority, in which case its constitution should be altered and adapted to its enlarged duties and responsibilities.

A copy of the report has been sent to the Local Government Board, whose earnest consideration of the same has been requested. It will be seen that the recommendations are entirely in accordance with the views enunciated by Dr. Cortis in our columns lately. The Metropolitan Asylums Board appear to us to be acting with a single eye to the public good, for while there is no doubt of their readiness to undertake the enlarged duties which the proposed alteration would cast upon them, yet we believe they are equally ready to resign their functions to another body should that course be deemed desirable. The Vestries and District Boards of the metropolis are clearly determined not to do the work, and we do not think it could fall into better hands than those of the Asylums Board.

EXTIRPATION OF THE LARYNX.

M. PAUL BERGER, in noticing (*Revue des Sciences Médicales*) the latest contributions to the literature of this subject, states that the operation of complete removal of the larynx has now been performed nine times—viz., twice by Billroth and Maas respectively, and once each by Heine, Schmidt, Schoenborn, Bottini, and Langenbeck. In all these cases the operation was undertaken for malignant disease. A fatal result is recorded for three of these cases: in two from pneumonia, one (Billroth's) on the fourth and the other (Maas's) on the fourteenth day after operation; in a third case (Schoenborn's), pulmonary gangrene, following pneumonia, led to death on the fourth day after operation. In Schmidt's case, death was attributed to collapse on the sixth day. In Billroth's first case, and in Heine's case, the fatal result was due to recurrence of the disease for which the operation was undertaken; in the one the patient lived three months, and in the other six, after the ablation. Lastly, as regards the three successful cases, Bottini's patient was living and in good health six months after the operation; but as to the remaining two patients, the sequel of their cases has yet to be published. The operation of partial extirpation or resection of the larynx has been once performed by Heine in a case of syphilitic stricture; the anterior half of the thyroid cartilage was removed, but the patient lived only eleven months, his death being due to an extension of the disease. M. Berger does not regard these results as encouraging; but it must be remembered that the operation, although bold, may yet be justifiable, and a fortunate result even in one case out of ten is not wholly to be disregarded.

MEDICAL OFFICERS OF HEALTH AND GENERAL PRACTITIONERS.

ANOTHER instance of a medical officer of health thinking it a part of his duty to express a different opinion as to the nature of certain cases from that already given by the practitioner in attendance is brought under our notice. The cases were in the workhouse, under the care of Mr. Henry J. Ashbourne, medical officer of Horsham Union, and considered by him as cases of modified variola. Two cases of small-pox had been recently imported from London into the town, as into so many other towns, and from these it was supposed that the infection came. Dr. Kelly went elaborately into the question of diagnosis, and, before the sanitary authority, expressed an opinion that the disease in these cases was varicella. Such conduct was naturally distasteful to the practitioner, a man of twenty-five years' standing. The difference is the more to be regretted as in either case the disease was infectious, and in the present state of the country the steps taken by Mr. Ashbourne were thoroughly judicious, and, we are glad to learn, entirely approved by the guardians. We shall publish all such instances in the interest of the medical officers as well as that of practitioners, assured as we are that the Health Acts can only be worked by an unobtrusive and respectful policy on the part of the former, and by acting in harmony with the latter. It is not to be expected that men seeing disease every day will submit to have their diagnosis in doubtful cases reversed by the representatives of preventive medicine.

ANALYSTS AT A DISCOUNT.

IT is, unfortunately, difficult to impress local authorities with a sense of their real needs. We fear there are at this moment many enterprising townships and districts in which the sanitary authority has not deemed it necessary to appoint a public analyst. This is a grievous omission. Guildford, Surrey, is in the anomalous position indicated. The struggle to retain the assize for Surrey was carried on with boundless spirit. Guildford has a Recorder, and enjoys the plenitude of parliamentary influence and local dignity; but Guildford, in the judgment of a few economical minds entrusted with authority, does not require an analyst. Meanwhile, it is alleged, we know not with how much accuracy, that water and articles of consumption generally are supplied to the inhabitants in a condition of impurity which an analyst would expose. It ought to suffice that a local authority is reminded of its duty in a matter of such moment as this to which we have adverted. Some one in the House of Commons should move for a return of places in which the powers given and the obligations conferred by Act of Parliament in respect of adulterations have not been taken up and carried out for the public good. It is little use making wise laws if they cannot be enforced.

ARMY ESTIMATES.

ARMY men are in the habit of subjecting these estimates to a rigid scrutiny, with the object of determining the intentions of the Government in regard to themselves, or the branches of the service to which they belong, and we doubt not that medical officers will turn over the pages with a similar object in view. According to Vote 4, in the copy of the Army Estimates for 1877–78 before us, we learn that some alterations have been effected, although not, as it

appears to us, of an important or significant character. The pay of the Director-General and office establishment is transferred to Vote 16. In 1876-7 there were seven surgeons-general, as against six in 1877-8, accounted for, however, by one of these officers being removed to Vote 16; and there are 17 deputy surgeons-general, as against 21 of the previous year, two of the latter number being accounted for in Vote 16, and two supernumerary of the rank having been absorbed. The number of surgeons-major and surgeons is 501 in the estimates for 1877-78, as against 526 in those for the previous year, showing a reduction of 25, three of the number being accounted for, however, in Vote 16. The pay of the Director-General's establishment shows a decrease in Vote 4 of upwards of £9000 by the removal of this item to Vote 16. The decrease as regards pay of the various ranks of the department in the estimates is £17,436. There is an increase of £158 for departmental contingencies; of £535 for allowances to private medical practitioners; and of £2000 on the cost of medicines. Under Vote 14 we find an increase of £800, for 100 instead of 75 probationers at the Military Medical School.

COMPARISON OF SENSIBILITY AND MOTILITY.

AT a late meeting of the Académie des Sciences (Dec. 4th, 1876), M. Richet read a paper on Sensibility compared with Motility, in regard to which he had arrived at the following conclusions:—Sensibility under the influence of prolonged excitation slowly decreases, but rapidly returns to its normal condition. Isolated excitations produce no sensory effect, but when successive they produce an effect which is great in proportion to their frequency. Supposing the excitations to be equal, *inter se*, and repeated, the time required for perception is prolonged in proportion to their feebleness, and abbreviated in proportion to their intensity. The phenomena known under the name of education of perception come under the head of facts of addition. If the excitations are very feeble, a limited number can be applied without producing any sensory effect, but an unlimited number of excitations, however feeble, always end in producing a perception. The transmission of an excitation is always very rapid, but the persistence of the sensory effect may be of variable duration, and is proportional to the intensity of the excitation. From these facts he formulates the following law: The number of excitations necessary to occasion a perception or a movement is universally proportional to the intensity and to the frequency of these excitations. In this respect there is a striking analogy between the work done by the muscles and that by the nerve-centres.

NAVAL CADETS' COLLEGE SITE.

THE Report of the Committee appointed by the Lords of the Admiralty to advise as to the most desirable site for a College for Naval Cadets has just been presented to Parliament. The President was Admiral Wellesley, C.B.; and the medical members were Inspector-General Dr. James Donnet and Dr. John Sutherland, of the War Office. The points to be investigated and the requirements set forth in the Admiralty letter of instructions were of a varied kind—such as general salubrity, water-supply, a close harbour, with easy access to the sea for the accommodation of a small training-vessel and for safe boating and bathing, proper space for recreation-grounds, absence of special temptations to immorality, access by railway, and reasonable proximity to a great naval port. The Committee, according to their tabular report, appear to have visited no less than twenty-eight sites; while they consider that a position on Southampton Water, adjacent to the small hamlet of Hamble, is, as far as its topography, subsoil, climate, means of drainage and water-supply, facilities for exercise, and general salubrity are concerned, well adapted for the Naval Cadets' College. The Committee, nevertheless, advise the selection of Mount Boon, at Dartmouth, as the site for the proposed College. We have already, in discussing this subject on a previous occasion, given a short description of this estate, the only objection to which is, perhaps, the moisture of the climate, rendering it less invigorating for young lads destined for a sea life than might be desired. Still the site is one of great beauty; there is no population close to it; the facilities for boating and bathing are all that could be desired; and the cadets on board the *Britannia* and the *Hindoostan* moored in the Dart have been remarkably healthy. The Mount Boon site, in the words of the Report, "must be pronounced the finest we have seen for a Cadet College, and may also be considered to be a perfectly healthy one."

A CANADIAN GRIEVANCE.

THE *Medical and Surgical Journal*, published in the Dominion, in its issue for February, deals at considerable length with the ineligibility of surgeons other than those possessing British qualifications for appointments on board emigrant and passenger ships sailing from British ports. It strives, and we think successfully, to show that the educational tests by which admission is gained to the profession are as comprehensive and exacting in Canada as those imposed in England, and submits that Canadian surgeons holding qualifications equivalent to those conferred at home should not be excluded from serving on board vessels which are identified with the progress, enterprise, and wealth of the colony—vessels that are performing the passenger traffic of the colony, that are subsidised by the Government of the colony, that carry the mails of the colony, and are in every way colonial vessels, except in being registered as British ships. Our contemporary winds up by quoting a letter written by Sir Hugh Allan, of the firm of Allan Brothers, Liverpool (whose steam-ships are as fine as any on the sea), in which that gentleman stigmatises the requirement of the Board of Trade as unjust and a slight upon the Dominion. We believe that the Canadian Government will be asked to make a representation on the matter.

THE METROPOLITAN ASYLUMS BOARD AND THE LIMEHOUSE HOSPITAL.

IT may be doubted whether Mr. Sclater-Booth's defence of the action of the Metropolitan Asylums Board against the attack of Mr. Ritchie, supported by Mr. Samuda, in the House of Commons, would have been altogether satisfactory, had he not been so unexpectedly reinforced by Mr. Walter. We are not prepared to say that an inquiry by Select Committee, such as that proposed by Mr. Ritchie, into the constitution, powers, duties, and proceedings of the Asylums Board would not have been desirable, and, indeed, would not have been welcome, had the motion been brought forward as a substantive question. But to base it upon the doings of the Board at Limehouse was clearly an error of judgment. Mr. Walter's statement, founded upon personal examination of the building which has been converted into a hospital, and its situation, amply justifies the Asylums Board in its selection. But it does more. It raises a question which it is to be regretted was not mooted in the House. The popular outcry against the hospital in Limehouse had some peculiar features. It affected neighbouring industrial callings so much as to induce the workpeople or some of them to cease their labour. Now it was quite evident, we believe, at the time that this measure on the part of the

workpeople was not so much on their own motive as on the motive of a systematic agitation promoted and kept up by persons of higher station. The very persons, in fact, who ought to have been present to understand and to make known the utter fallaciousness of the arguments used against the hospital, were those who exercised the greatest influence in exciting it. It is very lamentable that such should be the case, but it is, nevertheless, the fact, and Mr. Sclater-Booth has so far yielded to the wishes of the locality as to promise a very early relief from the hospital bugbear.

NAUTICO-MEDICAL NOTES.

Captain Bedford Pim's Bill to provide hospitals for the mercantile marine was presented again this session, and the second reading is fixed for the 7th of March. We criticised the Bill last year, and then characterised it as a crude and ill-considered measure. The promoters, in fact, attempt too much; for they not only propose to establish hospitals for seamen at all the chief ports in the kingdom, but to institute a systematic medical inspection. The latter, as we have many times urged, ought to be a Government measure; indeed, the Ministry, in accordance with the utterances of last session, is distinctly pledged to provide by legislation for the health and safety of seamen, having, it may be presumed, at all events for the present, done with unseaworthy ships.

The master of the *G. V. Paysant*, a vessel trading between South America and Swansea, was fined some days ago for neglecting to make an entry in his log-book to the effect that five of his crew were affected with scurvy.

The provisional order about to be issued by the Local Government Board for sewerage purposes as to towns near the Thames will include Teddington, Brentford, Isleworth, Ham, Twickenham, and Richmond. As all these places discharge their sewage into the river within the district of the Port of London Sanitary Authority, the Corporation of London have authorised their solicitor to urge forward the proposed combination of districts.

WORKHOUSE MORTALITY.

Stubborn facts are constantly pointing to the necessity for thoroughly investigating the sanitary condition and medical superintendence of our workhouses and workhouse schools. It appears that since the beginning of this year no less than 17 deaths from measles have been registered in the Manchester Workhouse at Crumpsall, of which 13 were recorded in the first three weeks of February. Now, as the average mortality to cases of measles is little more than 5 per cent., and as even this percentage is in great measure due to secondary diseases arising from neglect of the patients, it follows either that there have recently been nearly 300 cases of measles in this workhouse or that the rate of mortality has been exceptionally high. The Registrar-General reports that measles caused 71 deaths in this workhouse during 1865, and that the disease has since been frequently prevalent, resulting in no less than 63 deaths during the four years 1873–6. It is to be hoped that the Local Government Board will institute a searching inquiry into the condition and management of this workhouse establishment. Beyond information as to the rate of mortality among the cases, it would be interesting to know how many children are now residing in the workhouse, and how many have suffered from the disease. The number of fatal cases of measles in the Crumpsall Workhouse may be partly due to the insanitary condition of the institution, partly to neglect of proper isolation of the early cases, and partly to careless nursing, but the true cause can only be discovered by careful and thoroughly impartial inquiry.

THE METROPOLITAN AND NATIONAL NURSING ASSOCIATION.

The annual meeting of this Association, which has been established to provide trained nurses for the sick poor, was held at the Home, 23, Bloomsbury-square, on the 19th ult. The chair was taken by Mr. W. Rathbone, M.P., in the absence of the Duke of Westminster. It appears that during the past year 175 cases were nursed from the central home, each case on the average occupying twenty-three and a half days. Miss Florence Lees stated that the home had nursed a case of small-pox, but that "there was no danger of infection by nurses of this Association, as every means were taken to disinfect the nurses." The secretary stated that it was proposed to found an additional nurses' home for Islington and Clerkenwell. We gather from the report read at the meeting that more funds are needed, and we have no doubt that funds will be forthcoming if the published details of the work done, an analysis of the 175 cases, showing the nature of the illnesses and the social position of the patients, and an official statement of the expense incurred, are such as to satisfy the requirements of economy and proportionate utility.

A PATHOLOGICAL INDEX.

Before the fund available for scientific work is finally exhausted, will not the Pathological Society make application for means to defray the cost of a most serviceable enterprise? At the present moment no investigator in pathology can ascertain how much has been done, or how many and what cases have been recorded in any particular department. There is especial need for the construction of a full and well-arranged index of pathology, comprising the best records extant in this country, on the Continent, and in America—a too much neglected sphere of medical work. Year after year observers of no mean ability report cases as presenting features of novelty which are in fact only corroborative of observations made half a century ago. These should certainly be relegated to the groups to which they belong. Practical pathology as pursued among us is little better than a pursuit resembling the enterprise of picking up shells and pebbles on the sea-shore, with the deferred and therefore feeble hope that they may some day prove useful. There has been no serious attempt to introduce method into the inquiry. The notion of a system of natural orders in relation to disease has apparently not yet dawned on our *savants*. It is not too late to mend this. Let some of the money now offered be devoted to the compilation of a good index, with intelligible classification. It will afterwards be easy to refer new cases to their proper groups, and work with a result may grow out of a pastime, as at present conducted, almost worthy of the epithet Schleiden applied to popular, as contrasted with scientific, botany.

OBSCENE QUACKERY AND THE EAST LONDON MEDICAL DEFENCE ASSOCIATION.

A man styling himself "Dr. Harrison, F.S.A., Member of the College of Physicians and Surgeons, N.Y., U.S.; de la Société de Médécine de Rouen; National Academy of Sciences; Fellow Institute of France, of England, &c. &c.," and residing at 51, Bernard-street, Russell-square, was summoned by the secretary of the East London Medical Defence Association before Mr. Barstow, at the Clerkenwell Police-court, on the 19th ult., to show cause why a large number of obscene quack pamphlets which had been seized at his residence a few days before by the police, under a search warrant granted upon the application of the solicitor to the Association, should not be destroyed.

Mr. Pridham stated that defendant was in the habit of sending his circulars to the public through the post. The magistrate ordered the whole of the books, circulars, and pamphlets seized to be destroyed, and the payment by defendant of the costs of the prosecution. It is gratifying to see that this useful and energetic Society does not restrict itself to the use of one instrument, and is ready to employ other Acts of Parliament when the Medical Act is shown to be incapable of repressing a very abominable form of quackery. We have been favoured with a glance at the pamphlets, which have been found in bagfuls, and anything more disgusting and demoralising cannot be imagined.

DUAL GOVERNMENT IN HOSPITALS.

THIS question was again the subject of energetic discussion at the Metropolitan Asylums Board some few days ago. It will be remembered that the Local Government Board has lately, by official minute, expressed to the Asylums Board the desirability of making the senior resident medical officers at the new Fulham and Deptford hospitals supreme in all matters of administration. This plan has been, and still is, persistently opposed by a majority of the Board, who cling to the dual system, as practised at Leavesden and Colney Hatch, where the medical officer and the steward are each in his own department independent of the other, and responsible only to the managing committee of the asylum. Sir Edmund Currie, who is strongly opposed to the dual system, remarked at the meeting that the asylums above mentioned were not fair examples, because Sir W. Wyatt, who was chairman of the committee at both places, was the real unit. This may or may not be the case, although it is manifest that if the chief representative of the management constantly and really supervises the work the evils attendant upon the dual system are practically reduced to a minimum. We see no reason, however, at present to depart from the general principles enunciated many times in THE LANCET on this subject. They are to the effect that no establishment can be properly administered unless one officer exists as final referee, and who, of course, is practically responsible to the manager for all that occurs. In the cases now quoted the supreme power must of necessity be vested either in the senior medical officer or the steward, and we believe that the Local Government Board have exercised a wise discretion in deciding to cast upon the former the responsibilities in connexion with the entire administration of these institutions.

THE WORKING MAN'S DOCTOR'S BILL.

PROF. LEVI and Mr. Mundella have both lately discoursed well on the expenses of working men. Both of them passed very lightly over the expenditure for medical purposes. Yet the working man and his family require, as much as anybody, good medical attendance. For the man himself it is invaluable, and may save his right hand, or, maybe, his lungs, or even his life. For as much as it costs many a working man a week for mere beer he may have himself attended for a year, and at even a less rate he may have his wife and children so attended. This accommodation is provided in Provident Dispensaries, where, too, working men may have their choice of a doctor. Yet the working classes, including mechanics and artisans, still think it consistent with their dignity to take their medicines and advice from charitable institutions, such as dispensaries and hospitals. One man told us lately that he and his fellow-workmen always were doctored at St. Bartholomew's because their firm subscribed. This is an entire misuse of a hospital, discreditable alike to the firm and the employed. Working men are intelligent enough now to know that sickness is one of the things to be provided for, and the provision on the part of the profession is so universal and accommodating that henceforth they should be ashamed of all gratuitous professional assistance.

THE VENTNOR CONSUMPTION HOSPITAL.

THIS eminently useful institution, founded and completed by the indomitable energy and perseverance of Dr. Arthur Hill Hassall, is reported to be sorely in want of funds. The expenditure is said to average about £5000 annually, whereas the sum total of annual subscriptions amounts to little more than £1000; and legacies and donations are, of course, very fitful and fluctuating sources of income. Two or three of the blocks are at present closed, ostensibly for cleaning and repair, but the entire building cannot continue to be kept in full working order unless more money is forthcoming. Is it not possible for the committee to make arrangements with some of the large London hospitals, whereby a certain number of beds could be reserved for patients drafted from these latter institutions on payment of a certain annual lump sum? Guy's, St. Bartholomew's, and the Brompton Hospital are rich enough each to afford to some half-dozen of their clients a temporary residence in the lovely climate of the Undercliff. It is, too, important to note that the railway service between London and the island is now much better, and that when certain arrangements at Ryde are completed the entire journey to Ventnor ought to be accomplished in four hours.

A NEW RISK OF MEDICAL PRACTICE.

MR. DAVID EDGAR JONES, of Cardiff, has had the honour of giving surgical advice and assistance to a patient who had been stabbed by her husband, and then not only of not being paid for his services, but being taken into court on a charge of something like an assault, simply because he was kind enough to exercise his discretion on the work of his assistant, and take out what he thought two or three superfluous stitches. We have long known that a medical man is expected to do almost anything gratuitously and on demand, at any amount of personal inconvenience to himself and patients. Further, that in doing so he is liable in many ways to have his good evil spoken of. But Mr. Jones's experience in this case is unique, and shows the possibility of a medical man being made the defendant in a police-court in circumstances where any other man would be the successful plaintiff in a county court. We may be told that the case against Mr. Jones was dismissed after the bench had consulted for a minute; but this is poor satisfaction for such an ordeal as that through which he has been dragged.

THE VACANCY AT KING'S COLLEGE.

RESPECTING the report that Professor Lister, in a reply to a memorial addressed to him by several hundreds of students at Edinburgh, stated that he did not intend to accept the appointment offered to him as successor to Sir William Fergusson in King's College, it is only right to state that the council has not yet considered the question of appointing a successor, and that no offer can have been officially made.

UNLAWFUL VACCINATION CERTIFICATES.

AT the Stratford Petty Sessions, on January 24th, a doubly-qualified but unregistered practitioner was charged by the East London Medical Defence Association with having signed a certificate of successful vaccination in a case he had not himself vaccinated. The Association prosecuted in consequence of complaints made to it that defend-

ant allowed unqualified persons to fill up vaccination and death certificates in his name. He now pleaded ignorance of the law, and at the request of his solicitor the case was adjourned for a few days, when the solicitor to the Association asked, and received the magistrates' permission, to withdraw the charge upon payment by the defendant of all costs. During the remand defendant had apologised to the Association, and pledged his word never to again attempt to cover unqualified practitioners.

HYDROPHOBIA.

CASES of hydrophobia are becoming unpleasantly numerous, if we may judge from the inquests reported ending in such a verdict. The last we notice is one in the Islington Workhouse. Can nothing more be done to protect the public from a disease which cannot at present be cured? We do not gather that there was a minute post-mortem examination in this case. Dr. Hardwicke would do a great service to medicine, and, through it, to the public, by assigning the examination of such cases to skilled pathologists. No stone should be left unturned in trying to elucidate the nature of a disease so fatal and distressing and withal so opprobrious to medicine.

THE LATE EXAMINATIONS FOR THE PUBLIC SERVICES.

WHATEVER may have been its influence on army recruiting, the application of a short-service system to the Army Medical Service has obviously proved a successful experiment so far. The Indian Medical Service, always the most popular of the three services, had, on the last occasion, a good number of candidates, and it was the only one in which competition was something more than a name.

THE question of the legitimacy of the colouration of peas by copper has been discussed at the Académie des Sciences of Paris on one or two recent occasions, and the result arrived at was similar to that respecting the adulteration of wine by fuchsine, to which we shall have occasion to refer. It was strongly urged by M. Pasteur and others that if not a technical adulteration which could be shown to be injurious, it was at any rate a dishonest admixture, and that the preserved peas which are coloured by copper ought to be distinctly designated as such; so that the consumer might at any rate choose for himself whether he would or would not consume habitually the small portions of copper contained in them.

THE movement in America in favour of reforming the office of coroner, to which we alluded last week, is extending throughout the country generally. In New York the extreme measure of abolishing the office altogether is advocated by many. The medical press of America gives no thought or heed to the law of libel, and it speaks of the present system and of the men holding appointments under it with such startling freedom as to leave little doubt that the very grossest abuses have marked, for many years, an office eminently demanding honesty and discretion in its possessor.

DR. LITTLEJOHN, medical officer of health for the City of Edinburgh, has issued a report on the Compulsory Intimation of Infectious Diseases, which the authorities are distributing widely. Dr. Littlejohn is strongly of opinion that the duty of reporting the occurrence of a case of infectious disorder should be made compulsory on the medical attendant, and he would have a provision to that effect inserted in any amendment of our sanitary laws. A short time back the parochial medical officers of Edinburgh declared their willingness to report all such cases provided their brethren attending the better classes did the same, without which there would be created an invidious distinction, but protested against any fresh burden being thrown on the profession, without an acknowledgment that the service asked was a medical service demanding remuneration. Thereupon an offer of half-a-crown for each intimation of illness was made, which the doctors accepted. The subject presents many difficulties which will not easily be overcome. If we are to have a compulsory measure it must be made to apply to all, rich and poor. We would gladly see an expression of opinion on the question from some of the medical corporations of the country.

A RECENT half-yearly return of vaccination in the Hackney district shows that out of 2701 children whose births had been registered in the union, 2222 had been successfully vaccinated, 7 were insusceptible, 1 had had small-pox, 188 had died unvaccinated, 66 were postponed under medical certificates, 6 had removed to other districts, and 184 to places not known, leaving 27 only unaccounted for. The authorities of Hackney and their officials deserve credit for the thorough manner in which the provisions of the vaccination laws are carried out in the district.

WE are sorry to learn that the subscriptions received by the Middlesex Hospital last year were much below what were required to meet the expenditure. It would be well to correct an impression which seems to be gaining ground, that the Hospital Sunday Fund largely relieves hospitals of their necessities. The amount received from this source goes but a very little way to defray the enormous expense incidental to the functions of a hospital. Such a charity cannot be carried out without large annual subscriptions.

AT the quarterly meeting of the Governors of the Brompton Hospital for Consumption it was stated that a sub-committee was considering the question of extending the hospital by making use of the property purchased on the south side of the Fulham-road. At the same time several handsome bequests were announced. The institution would seem to be getting very wealthy, and there is, therefore, every reason why the contemplated extension of the buildings should be carried out.

WE may remind our readers that two important communications will be made to the Pathological Society at its meeting on Tuesday next. The specimen, exhibited by Sir William Gull and Dr. Sutton, showing fibroid changes in the spinal cord and its bloodvessels, associated with chronic Bright's disease, and those exhibited by Mr. Godlee of the organisms present in vaccine and variolous virus, will be ready for inspection half an hour before the meeting of the Society.

THE Redruth Local Board has at length seen its way to the establishment of an infectious diseases hospital, having recently obtained possession of suitable premises for that purpose. An authority which has thus exhibited a discreet energy not always characteristic of local boards may, we hope, be trusted to take steps to supply another want of the inhabitants of Redruth—namely, a good system of drainage, which is still, we understand, a desideratum.

PARIS has just started its Clinical Society, which held its first meeting on the 21st February, when brief addresses were delivered by the honorary President, M. Barth, and the President, M. Peter. It is gratifying to note that the number of candidates seeking admission has far exceeded the limits to which it was originally proposed to confine the Society. At this meeting a note was communicated by M. Dieulafoy on Deafness as a Symptom of Bright's Disease.

THE meeting of the Obstetrical Society on Wednesday evening promises to be one of much interest. Dr. Edis will read a paper on "The Forceps in Modern Midwifery," which is likely to give rise to discussion. Dr. Playfair will also contribute a paper on "Fibroid Tumour complicating Delivery," should time permit.

AN Executive Committee meeting of the General Medical Council has been summoned. In addition to other pressing business we imagine that the subject of the time of the next meeting of the Council will be fixed.

SANITARY CONDITION OF THE WAR OFFICE.

THE Report of the Commission recently appointed to inquire into the sanitary state of the War Office is issued as we go to press. The whole of the War Office buildings, in Pall Mall, from basement to roof, were examined. The Commission, while satisfied that by no alterations can the building be rendered sanitarily satisfactory, desire to suggest that the following means should at once be adopted for the purpose of mitigating some of the present defects:—

"1. The closets in the area should be removed, with the exception of those needed by the families resident in the building, which should be thoroughly ventilated.

"2. The laundry should be removed.

"3. If it be impossible to remove the printing establishment, or greatly reduce the staff, ventilating shafts should be introduced into the second and third rooms, as has already been done in the first.

"4. The whole of the gas-burners throughout the building should have hoods and tubes.

"5. The condemned waterclosets ought to be removed at once.

"6. The waste pipes of the lavatories, and the overflow pipes of the cisterns, should terminate in the open air, and be cut off from all direct communication with drains. No traps will efficiently supply the place of open air termination.

"7. All taps communicating with cisterns which supply waterclosets should be removed, so that there may be no possibility of the water being used for drinking purposes.

"8. The building has been so cut about and altered that we cannot recommend any one system of ventilation as applicable to the whole office. The ventilation of each room and passage should at once be taken in hand, every case being treated specially. We would however recommend, in every instance, that the ventilators introduced should be of such a nature as to be beyond the control of the occupants of the room, and so constructed as not to create draughts.

"To render the air of the rooms less foul we advise that rooms be set apart for luncheons, and that a special hour be fixed for the meal. The windows of the rooms should be freely opened by a porter during the absence of the occupants.

"It must be borne in mind that these suggestions, if carried out, will, in our opinion, only mitigate evils, not remove them.

(Signed) "WILLIAM JENNER, M.D.
"W. M. MUIR, M.D.
"EDWARD C. SEATON, M.D.
"A. B. MITFORD."

MANCHESTER MEDICAL SOCIETY.—At the annual general meeting of this Society, held on January 10th, the following were elected office bearers for 1877:—President: Dr. Ransome. Vice-Presidents: Dr. Leech, Dr. Little, Dr. Lloyd Roberts, Mr. Windsor. Hon. Secretary: Mr. Walter Whitehead. Hon. Treasurer: Dr. Thorburn. Hon. Librarian: Mr. Cullingworth. Committee: Dr. Bird, Dr. Borchardt, Mr. Broadbent, Mr. Bradley, Mr. S. Buckley, Dr. Dreschfeld, Professor Gamgee, Mr. Galt, Mr. Heath, Mr. Jones, Mr. Pinder, Dr. Ross. Auditors: Mr. A. Boutflower, Dr. Maccall.

Correspondence.

"Audi alteram partem."

ON POISONING BY COPPER.

To the Editor of THE LANCET.

SIR,—Having, in the course of some recent inquiries into poisoning by copper, come across certain facts of special interest with which I was not previously acquainted, and which, if I am not mistaken, have not been noticed by English writers on toxicology, I should be glad if you could find place for them in your columns.

Acute Poisoning by Copper.

1. In the second volume of the "Medical Observations and Inquiries, by a Society of Physicians in London," published 1764, I find a letter from Mr. James Ramsay, surgeon, on "Copper Vessels," addressed to George Macaulay, M.D., and read at the Society, October 2nd, 1758. I will give the substance of this communication in as few words as I can.

On the 2nd Sept., 1757, William Carlile, aged fourteen, was suddenly seized with convulsions, and fell down on deck insensible. For a quarter of an hour he remained with eyes fixed, face convulsed, and head awry. Under the influence of hartshorn he became a little sensible, and soon after had a slight anodyne, which he immediately threw up with a large quantity of yellow bile. A messmate here recollected that he had seen him at dinner eating peas from the bottom and sides of the large copper kettle. He was then ordered an emetic, but before it could be given fell asleep. During the night he was frequently convulsed, cried out like a child, talked incoherently, and struggled so that two men could scarce hold him. In the morning he had pains in his bones and head, and nausea. An emetic of ipecacuanha was therefore given him, followed by an anodyne, and in two days he was quite well. Upon inspecting the kettle, a good deal of verdigris was found at the corners of it.

Six days after this Mr. Ramsay was summoned on board the *Vestal* frigate to consult with two other surgeons "about some people that were taken suddenly ill of a very surprising disorder." On the 6th September (two days previously) one man was seized in an instant with dulness, stupidity, and headache. He fell down, and struggled so hard that it required six men to hold him; soon became delirious, and behaved in the most extravagant manner. The next day (the 7th) several more were seized, and on the 8th sixteen more. They were all at times outrageous and mad, struggling violently, and snapping with their teeth at those who held them. One fancied himself a captain, and gave orders accordingly; a second called out "ground ivy to sell"; a third, "old chairs to mend"; one spat in your face, and laughed heartily; one was merry, and sang; another surly and ill-natured; another moped in a corner, stupid and insensible. All had lucid intervals, and complained of pains in their bones and of headache. The pulse, during the fit, was full, quick, and strong; but it became soft on a sweat breaking out. Their eyes were inflamed, their looks wild, their speech incoherent, and they slept little. None complained of gripes, and few of nausea. The fits returned after various intervals and more than once, and seem to have been rendered less violent by bleeding. Vomiting did not afford any immediate relief. After the 8th there were no more seizures, and all recovered in three or four days. The ship was large, airy, newly built, and hitherto very healthy. The men were served with fresh meat, and the beer and provisions were good. The seizures chiefly took place after dinner. On inspecting the kettles, "nothing remarkable was found in them."

Again, under date November 27, Mr. Ramsay witnesses "the like malady," "attended with the same odd symptoms," on board the *Adventure*, armed ship. The surgeon found the coppers very foul; but, upon remedying that fault, the disease stopped. About fifteen persons were seized with it.

Mr. Ramsay attributed these strange symptoms to verdigris; adding, that "though in the vessel the fault was not so very apparent, yet the disease, stopping all of a

sudden, cannot so well be accounted for in any other manner than from a little more caution used by the cooks in cleaning their kettles."

I will not at present comment further on this case than to note the extreme violence of the convulsions present, and that in this respect the cases are in harmony with the fact recorded by Percival, that the most violent convulsions he had ever seen occurred in a girl who had swallowed two drachms of sulphate of copper, but recovered; and with what is said of the three men who died of copper-poisoning on board the *Cyclops* frigate, in whom there was insensibility and "the body was violently convulsed."

2. I have been indebted to a curious treatise on the adulteration of food, &c., for reference to a work of which I was previously ignorant, and which I do not find quoted in works on Toxicology. I allude to the "Medical Essays" of John Johnstone, M.D., F.R.S., a Fellow of the Royal College of Physicians, and Harveian orator (1819). The work consists of four essays printed at various periods between 1795 and 1805, to which his Harveian oration is added. The first essay is on "Mineral Poisons," and gained the Medical Society's Prize Medal offered in 1793. It consists of 168 pages 8vo, and, considering the time at which it was written, is a very creditable production. In the chapter on Copper, after citing the fatal accident on board the *Cyclops* frigate, in which thirty-six men were poisoned by victuals prepared in a foul copper, of which number three died, and three well-known cases by Percival, with two from Neumann's "Chemistry," in one of which "severe vomitings, with gripes and convulsions," arose "from the application of the unguentum Egyptiacum to the mouths of children," the author goes on to say: "I have known the same inconvenience arise from the use of a cupreous ointment for the cure of aphthæ, and in one case the life of the child was saved with difficulty; though, from the quantity of ointment applied to the mouth, the portion of copper taken into the stomach must have been very small." The subject of poisoning by copper, as treated in the fifth chapter of Johnstone's essay, will well repay perusal.

3. In one of the works to which I have had occasion to refer reference is made, through inadvertence, to a certain lamentable occurrence that took place at Salthill in 1773. The writer was evidently under the impression that that was a case of poisoning by copper. As I have more than once come across a reference to this case (and to the best of my recollection it is mentioned by Howard), I referred to the pages of the Annual Register for 1773, and there found an authentic account of this lamentable occurrence. It turned out to be not a case of poisoning by copper, but one of the most painfully interesting instances on record of an attack of gaol fever, having for its victims a group of local officials, brought into contact, not with prisoners, but with paupers. All who came into contact with the paupers had the fever, and half the number died, the only one of the body who escaped being a gentleman who was not present when the paupers were seen. This case becomes doubly interesting when we find it confirmed, as it is, by Dr. John Johnstone in the essay in which he justifies his father's claim to the invention and use of muriatic acid gas as a disinfectant. He shows, by more than one instance in point, that the gaol fever which afflicted our prisoners in Howard's day made itself at home also in our workhouses. This fact, so interesting to the student of the health-history of England, is brought into strong relief by the tragedy of Salthill, and the cases which Dr. John Johnstone finds occasion to quote.

I am, Sir, your obedient servant,

Gordon-street, Feb. 26th, 1877. WILLIAM A. GUY.

SPONTANEOUS GENERATION.

To the Editor of THE LANCET.

SIR,—In THE LANCET of the 17th of February there is an article in which Dr. Tyndall and myself are referred to in the following terms. Speaking of Dr. Bastian and of those who share his opinions, the writer of the article says:—"These gentlemen deny the exclusiveness of the germ theory, and maintain the doctrine of spontaneous generation, which, at Glasgow last October, Dr. Tyndall declared owed its existence to the untrained experimentation of its advocates. But about two months before this declaration M. Pasteur, whom Dr. Tyndall has placed in the ranks of 'experimenters who can walk without tripping,' had acknowledged an opponent in the right and himself in the wrong." The opponent here referred to is Dr. Bastian.

I should be much obliged to you if you would have the goodness to rectify this assertion in your next number. I was the first to demonstrate, fifteen years ago, that the sterilisation of organic liquids, when they are neuter or slightly alkaline, requires a temperature higher than 100° C. Dr. Bastian then, in heating only to 100° C. his urine on the one side and his potash on the other, and then mixing them so as to obtain neutrality, has made an experiment which takes its place in the list of those to which I refer. Confining himself to a temperature of 100°, he has obtained, and he can obtain, bacteria. It is in reference to this that I have said I agreed with him. How should it be otherwise? He has simply repeated one of my own experiments, and it is possible to compose a thousand liquids which will lead to the same result. It is only necessary to make them agree with the general formula which I have given. The error of Dr. Bastian consists in the assertion that these experiments on neutral and alkaline liquids—experiments which are mine, and which he has appropriated while confirming them—establish spontaneous generation. I have challenged Dr. Bastian to successfully make the experiment in question with urine, only imposing on him the condition that the urine shall be sterile and the potash be pure or sufficiently heated. I am ready to prove to Dr. Bastian that bacteria only appear when they are introduced either by the urine or by the solution of potash. Hence there is no such thing as spontaneous generation involved in this experiment. Dr. Bastian has accepted my challenge, and I have publicly thanked him before the Academy of Sciences, which immediately, at my request, named a commission, composed of MM. Dumas, Milne-Edwards, and Bousingault. We shall therefore soon know what we are to believe regarding the subject in debate.

I should have willingly spared Dr. Bastian the condemnation of an academical commission. On the 11th of last January I wrote to him thus:—"I entreat you, in the name of truth, to confess loyally that the conclusions you have advanced on the subject of spontaneous generation of bacteria in the solution of urine and potash are entirely erroneous. You will gain by doing so a reputation for scientific probity and honour, which will add more to your name and to the distinction of your career as a conscientious worker than even an important discovery."

Dr. Bastian has persisted in shutting his eyes against the truth.

Accept, Sir, the homage of my most distinguished sentiments.

Paris, February 25th. L. PASTEUR.

TREATMENT OF VARICOCELE.

To the Editor of THE LANCET.

SIR,—In last week's number of THE LANCET there is a very interesting paper by Dr. Will, of Aberdeen, on a method he employs for constricting the vessels in varicocele. That plan is very similar to one I have been in the habit of employing in public and private practice for some years, and which I last applied on the 19th of this month to a patient now lying in the Western Infirmary. I employ a small trocar and cannula to traverse the tissues behind and in front of the veins, and I pass a loop of strong wire through the cannula, one behind and another in front of the vessels, taking care to place these loops in opposite directions. I find the trocar and cannula a very speedy and easily guided means of placing the wires in the desired position. I introduce two sets or pairs of wires, the one below the other—i.e., nearer the scrotum—and they are tightened, as described by Dr. Will, by passing the free ends through the loops, and when drawn tight the loops disappear within the tissues. The constriction is perfect, and has always, in my experience, performed the part required. I have never had to abandon the wires, nor have they ever failed to divide the veins. If it is thought right, the vessels can be divided subcutaneously with the tenotomy knife between the con-

stricted points. Before drawing the loops home, I place a fine hempen ligature through each loop, so as to enable me to remove the loops at any time if I so desire. I think, however, that the presence of these ligatures is beneficial by augmenting the effusion we desire, and for the same reason such ligatures have appeared to me preferable to wire used for the same purpose. There is not, however, any real need of such ligatures for the removal of the wire loops, as, so soon as the veins are divided, the loops become loose, and can be withdrawn to either side. I fix the wires by placing a cork on either side of the scrotum, between the free ends of both sets of wires, and twisting the wires over it. The wires can be easily tightened at any time by drawing them firmer over the corks.

The plan of operating above referred to will be found very simple, and as effectual as any other.

I am, &c.,

Glasgow, February 27th. GEO. H. B. MACLEOD.

ENDURANCE AND DIET.

To the Editor of THE LANCET.

SIR,—When Dr. Crichton Browne tells us that endurance is the characteristic of graminivorous animals, and is due to their not eating flesh, while the storing up of power for a sudden rush is characteristic of the carnivora and is due to their flesh diet, and infers from thence that a flesh diet is unfavourable to endurance, he is surely generalising from too limited an induction of facts, and has undoubtedly taken the special characteristics of the feline tribe for the general characteristics of all the carnivora. How, for instance, will his thesis stand the test of an appeal to the facts known regarding the dog tribe? They are, in their wild state, as purely carnivorous as the cat tribe; yet, as is well known, endurance is their special characteristic, and they will run down, in consequence of the extraordinary degree to which they possess this quality, animals far surpassing them in speed. The term "the untiring wolf" has almost become a proverb; and another member of the same family, the coyote of Mexico, will start a stag, a graminivorous animal, on a chase of many hours' duration, running it out and home again to where the females and young of the pack have their abode, tiring it completely out so that they can bring it down just at the right spot, while they themselves come in as fresh as when they started.

And to speak of man himself, all experience proves that the greater endurance of the English navvy as compared with his Irish coadjutor is due to his more highly nitrogenised diet, and the Irishman proves himself his equal as soon as his diet is assimilated; or, to take a crucial instance, the celebrated lion hunter, Mr. Gordon Cumming, lived for five years on flesh only, undergoing the severest toils under an African sun, and expressly attributes, in his book, his powers of endurance to the fact of his living on a purely animal diet.

Not, certainly, that nitrogen is the force-forming element; all chemical analogy is sufficient to show us that carbon discharges that function; nor did it require the elaborate analyses of Dr. Pavy or Weston to establish that almost self-evident truth, however satisfactorily they may have silenced those who maintained that nitrogen was the force-forming element. Still it remains incontrovertible that nitrogen must be presented in large quantities to the system to enable it to effect the due combustion of the force-forming carbon, and a partially animal diet has always been practically found, for man, to be one of the best forms in which it can be presented; witness the value of beef-tea, for instance, in fevers, &c. I doubt if Dr. Crichton Browne's theory will stand the test of examination by the light of facts. I am, Sir, your obedient servant,

ISAAC ASHE, M.D. T.C.D.

Central Criminal Asylum, Dundrum, Dublin, February 19, 1877.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF COMMONS.

FOREIGN PHYSICIANS AND SURGEONS IN FRANCE.

ON Thursday the 22nd ult. Dr. LUSH put the following questions:—1. Whether the Government is in possession of and would give the House any information as to the proposals before the French Legislature to prohibit the practice of medicine and surgery in France by foreign physicians and surgeons? 2. Whether any representation has been made by our Ambassador in Paris to the French Government of the serious inconvenience to English invalids resident in France which would result if such proposals were carried out? 3. Whether the Government is prepared to suggest some means for the consideration of the question of the mutual recognition of degrees and diplomas by France and England.

Mr. BOURKE said Lord Derby had received a copy of the Bill now under the consideration of the French Chamber of Deputies with reference to the practice of medicine and surgery in France by foreign physicians and surgeons. The effect of the measure, if passed, would be to prevent the practice of medicine in France by anyone who had not qualified in that country as a medical man. The hardship that would thereby be inflicted on English medical men and invalids had been represented to the French Government, and at their request full information had been given of the law and custom in this country with regard to the practice of medicine, and a suggestion for the settlement of the question had been made by the Medical Council of Education. This proposal was now under the consideration of the French Government. (Hear, hear.)

VACCINE LYMPH IN IRELAND.

Sir M. HICKS-BEACH (in answer to Mr. Meldon) said: A grant of £400 a year has been for some time made to the Dublin Cow-pock Institution to enable it to provide a supply of vaccine lymph for Ireland. The hon. member called attention last year to the inadequacy of this grant for the provision of a fair supply of lymph. The subject was inquired into, and, with the full approval of the institution mentioned, it was decided that the grant to them should be discontinued, the whole subject put under the control of the Irish Local Government Board, and a sufficient sum placed at the disposal of the board to provide a gratuitous supply of lymph for Ireland in the same way as is done for England. This new arrangement comes into force on the 1st of April next; the sum provided for this purpose is £1200 a year; but as the precise details of its application are not yet settled, they could not be given in the estimate.

Medical News.

BRITISH MEDICAL SERVICE.—The following is a list of gentlemen who were successful at the examination held at the University of London on Feb. 12th:—

	Marks.		Marks.
Mullen, J. J.	2023	Hogan, E. M. A. ...	1781
Murphy, F. H. S. ...	2363	Ellis, P. M.	1770
De Caux, T.	2310	Kearney, T.	1705
Johnston, W. F. ...	2011	Kenny, W. J.	1645
Hodson, R. D. ...	1966	Irwin, A.	1550
Armstrong, J. ...	1945	O'Sullivan, P. J. ...	1521
Kirkpatrick, H. C...	1888	Mc Carthy, W. ...	1465
Browne, A. W. ...	1875	Brodie, J. F.	1290
Powell, C. E.	1808		

INDIAN MEDICAL SERVICE.—The following is a list of candidates who were successful at the competitive examination held at Burlington House on Feb. 12th:—

	Marks.		Marks.
Rogers, T. K.... ...	2519	Nelis, J. A.	2045
Hatch, W. K.... ...	2349	Mullen, D., M. D....	2043
Owler, W.	2345	Robinson, E. L. ...	2016
Coury, W.	2315	Mackenzie, A. W. ...	2015
Masani, H. D.... ...	2266	Hancock, J. G. ...	2010
Jack, D. M.	2220	Crofts, A. M.	1975
Nailer, H. A. F. ...	2210	Coates, W., M.D. ...	1947
Taaffe, R. J.	2194	Elcum, D.	1945
Gillies, W.	2185	Chatterjie, N.	1925
Kellie, G. J.	2180	*M'Carthy, M. J., M.D.	1919
Kirtikar, K. R. ...	2150	Crofts, James	1880
Mullane, J., M.D....	2100	Smyth, W. B.	1863
Bouton, G. C.... ...	2062	Blood, J....	1822
Basu, D.	2055		

* Mr. M'Carthy having withdrawn, Mr. B. L. Dutt is appointed in his place.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.—The following obtained the licences in Medicine and Midwifery at the February examinations:—

Frances Elizabeth Hoggan. | John M'Cluny. | Charles Roe.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Feb. 22nd:—

Black, James, Ayton-road, Brixton.
Poland, James Harry, Blackheath Villas, Blackheath.

The following gentlemen also passed the Primary Professional Examination:—

Joseph Stenson Hooker, Guy's Hospital; William George Scott, London Hospital; Thomas William Shepherd, St. Thomas's Hospital; Henry Slyman Michell, King's College.

[In the list published last week of gentlemen who received the Dental diploma of the Royal College of Surgeons on the 9th ult., the name "Harcourt, A. B. B., Trinity-square," should have been—Bevers, Harcourt A. B., Oxford.]

FIVE deaths from small-pox were registered in Dublin last week.

THE Earl of Warwick has been elected President of the General Hospital, Birmingham, for the ensuing year.

THE Northampton Guardians have increased (and the Local Government Board sanctioned) the salary of the Medical Officer of the Workhouse from £50 to £70 per annum.

A CARRIAGE and set of double harness were lately presented to Dr. Payne, of Clifton Union, by his friends, as a token of esteem and regard for his social and professional qualifications.

THE Bradford (Yorkshire) Medico-Chirurgical Society will, out of respect to the memory of the late Mr. John D. Lawrie, the President, refrain from appointing a successor during the remainder of his year of office, but will select a chairman at each meeting from the members present.

SMALL-POX is very prevalent in Madras and Indore, and cases continue to be reported at many of the military stations of India. Cholera, which bore a very threatening aspect on the Cashmerian frontier some time back, appears now to be in abeyance. The north-west provinces are fairly healthy.

MR. J. R. C. WAYET, a promising student of the Royal Infirmary, Bristol, died on Monday last from an overdose of laudanum. He had been rubbing his gums with it to allay neuralgic pains, and it is supposed that, being in a semi-conscious state, he took up the bottle and drank more than he intended or was aware of.

SIR WILLIAM FERGUSSON.—The freehold house, furniture, library, &c., of this much lamented member of our profession, will shortly be sold by auction, thus affording an opportunity to many of his old pupils to become possessed of some souvenir of their illustrious master.

Medical Appointments.

BARRETT, J. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the King's Lynn Union Workhouse, vice Woodward, resigned.

BETTS, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 10 District of the Chelmsford Union, vice Thorp, resigned.

CARMODY, W. F. P., M.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Killanne Dispensary District of the Enniscorthy Union, vice Doyle, resigned.

FELTHAM, W. P., M.R.C.S.E., L.S.A.L., has been appointed Junior House-Surgeon to the General Hospital and Dispensary, Cheltenham, vice Greenwood, resigned.

GASCOIGNE, W. E., L.R.C.S., L.S.A., L.R.C.P., has been appointed Assistant House-Surgeon to the Halifax Infirmary and Dispensary.

GOSLING, C. E., M.R.C.S.E., L.S.A.L., has been appointed a Resident Surgeon to the General Dispensary, Birmingham, vice Drury, resigned.

HOGG, R. B., M.R.C.S.E., L.S.A.L., has been appointed Second Assistant Medical Officer to the Kent Lunatic Asylum, Barming-heath, vice Young, resigned.

KENNY, B. J., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the Listowel Union Workhouse, vice Thorp, deceased.

MAGINNIS, R. M., M.B., has been appointed Medical Officer and Public Vaccinator to the Churchstanton and Otterford Districts of Taunton Union, vice Reed, resigned. Also Certifying Surgeon to the Stapley Silk Factory.

MATCHAM, A., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed a District Surgeon to the Royal South London Dispensary, vice Richards, resigned, and whose district has been divided.

MOORE, S., L.R.C.P.E. & L.M., L.F.P.S.G., has been appointed Union Medical Officer for the Milton Branch of the Thame Union.

PARKER, C. A., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Gosforth District of the Whitehaven Union, vice Somerville, resigned.

PEELE, E., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Examiner of Candidates for Admission to the Irish Training Establishment for the Army, Navy, and Mercantile Marine, and Dublin Training-ship.

RICHARD, B. M., L.F.P.S.G., has been appointed Medical Officer to the Dumbarton Combination Poor-house, vice Graham, deceased.

SAYER, Dr. T., has been appointed Medical Officer to the St. Stephen's Tent of Rechabites, No. 72, Kirkby-Stephen, vice Leland, deceased.

SEATON, E., M.D., has been appointed Physician to the Nottingham Dispensary, vice Robertson, resigned.

SMITH, C. J. H., M.B., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator for the South Norwood District of the Croydon Union, vice S. B. Roberts, deceased.

SMYTH, J. E., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed a District Surgeon to the Royal South London Dispensary, vice Richards, resigned, and whose district has been divided.

TAAFFE, M. H., L.R.C.S.I., L.A.H.D., has been appointed Apothecary to the Gort Dispensary and the Workhouse of the Gort Union, vice Simpson, resigned.

TURNER, A. M., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Liverpool Infirmary for Children, vice Hayward, resigned.

YOURELLE, M., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Dunboyne Dispensary District of the Dunshaughlin Union, co. Meath, vice Dwyer, resigned.

Births, Marriages, and Deaths.

BIRTHS.

AITKEN.—On the 15th ult., at Ayr, the wife of John Aitken, L.R.C.P.Ed., of a son.

BARRAS.—On the 21st ult., at Osborn-terrace, Govan, Glasgow, the wife of James Barras, M.D., of a daughter.

DICKSON.—On the 24th ult., at The Crescent, Kensington, the wife of Lindsay Frederick Dickson, M.R.C.S.E., Surgeon-Major, Bengal Army, of a daughter.

GOGARTY.—On the 19th ult., at Sandgate, the wife of Dr. Gogarty, Rifle Brigade, of a son.

HUDDART.—On the 22nd ult., at Greenhithe, the wife of C. H. C. Huddart, M.B., of a son.

REID.—On the 19th ult., at Canonbury-park, the wife of Alexander Reid, M.D., of a daughter.

SWEETING.—On the 23rd ult., at Basingstoke, the wife of Thomas Sweeting, M.D., of a daughter.

WALTERS.—On the 21st ult., at Reigate, the wife of John Walters, M.B., of a daughter.

MARRIAGES.

MCEWAN—HENDERSON.—On the 20th ult., at Greenock, James McEwan, M.B., C.M., to Maggie, daughter of the late Peter Henderson, Esq.

PIGGOTT—MAY.—On the 22nd ult., at Maldon, Allen Piggott, L.R.C.P.Ed., to Rosa Emma, daughter of Edwin May, Esq.

SMITH—BREEZE.—On the 20th ult., at Balgray Tower, Springburn, Glasgow, James Allan Smith, M.D., to Mary Stuart, daughter of James Breeze, Esq.

DEATHS.

BRITTON.—On the 25th ult., at Wellington-road, St. John's-wood, William Samuel Britton, M.R.C.S.E.

CARMICHAEL.—On the 17th ult., at Buckie, Banffshire, Duncan Carmichael, M.D., aged 69.

GUTCH.—On the 19th ult., at Broughton, William Gutch, M.R.C.S.E., aged 84.

MARKS.—On the 13th ult., at Heytesbury-street, Dublin, Hyman Marks, L.R.C.S.I., aged 40.

SCHOLFIELD.—On the 21st ult., at Todmorden, Samuel Scholfield, L.S.A.L., aged 56.

SEWELL.—On the 24th ult., at Cheriton, North Devon, William Mallett Sewell, M.R.C.S., eldest surviving son of William Cooper Sewell, of Euston-square and Easton House, Aldborough, Suffolk, aged 40.

SLOAN.—On the 13th ult., at Lisburn, Ebenezer Erskine Sloan, M.D., aged 27.

TUCK.—On the 25th ult., at Oxford, Francis Tuck, L.S.A.L., aged 44.

TYLOR.—On the 20th ult., at Lansdown, Joseph Savory Tylor, M.D., aged 63.

WADE.—On the 15th ult., at Kilcock, co. Kildare, Thomas Nugent Wade, L.R.C.P.Ed., aged 63.

WHITFIELD.—On the 21st ult., at Wandsworth-road, Richard Gullett Whitfield, L.S.A.L., M.S.A., F.Z.S., late Medical Secretary to St. Thomas's Hospital, aged 76.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Spencer Thomson: Torquay, Past and Present.
Mrs. Flower: Tom Allardyce.
Cassell's History of India. Part XV.
Home Gymnastics for the Health.
Dr. C. James: Du Darwinisme ou l'Homme-Singe.
Monthly Homœopathic Review.
White's Grammar School-texts: Cicero's Lælius on Friendship and Cato the Elder on Old Age.
Mrs. Caddy: Household Organisation.
Dr. Brunton: Tables of Materia Medica.
The Disease of Sleeplessness.
The Leisure Hour. March.
The Sunday Magazine. March

ROYAL COLLEGE OF SURGEONS.

THE following memorial is in course of signature by the Fellows of the Royal College of Surgeons:—

To the President, Vice-Presidents, and Council of the Royal College of Surgeons of England.

GENTLEMEN,—We, the undersigned Fellows of the Royal College of Surgeons, have learnt with regret that it is the intention of the Council to reduce the present standard of the examination for the Fellowship in favour of Members of the College of ten years' standing.

The proposed alteration appears to us to be objectionable on the following grounds, and we beg leave to lay them before the Council:—

It must materially impair the value of the diploma. The Fellowship is the highest title which the College of Surgeons confers, and we submit that it ought, therefore, to be at least on a level with any surgical title which can be obtained elsewhere. At present this diploma is equal to any surgical qualification in the country. If the alteration now proposed be carried out, it must inevitably sink in intrinsic value and professional esteem.

To reduce the standard of the examination will be an act of injustice to a large number of existing Fellows, who, especially of late, at the cost of much time and trouble and at considerable expense, have studied for and passed the examination. All this work has been done by them upon the understanding that it was necessary, and in view of the present value of the diploma. Surely it will be unfair to these now to admit upon easier terms others who have not thought it worth while to encounter the difficulty.

The admission to the Fellowship of Members of ten years' standing by a much easier examination will tend still further to hinder the progress of surgical education by encouraging too many to avoid the more searching examination, and to wait for an examination which will be to them easier than that for the Membership. Several instances are already within our knowledge in which men who would otherwise have presented themselves for the present examination have decided to wait a few years longer for the proposed one.

Finally, we fail to discover any adequate ground for the proposed alteration. We cannot ascertain that there is any valid reason in the future for having a larger number of Fellows than the present examination supplies. Certainly, we can see no reason for increasing the number by such a sacrifice.

But, even assuming the existence of strong reasons why the number of Fellows should be increased, we would suggest that this end might be accomplished by means less inconsistent with the efforts which have now been made for many years to improve the character of the examination.

We are, yours obediently,

Notes, Short Comments, and Answers to Correspondents.

WE beg to direct attention to a rule of this journal, that communications cannot be inserted if addressed simultaneously to other periodicals. The same principle applies to copies of lectures and papers forwarded for publication. The recent appearance in our columns of a letter, sent in duplicate elsewhere, compels this notification.

RAINFALL AND CLIMATE.

MR. G. J. SYMONS recently read a paper before the Institution of Surveyors, which suggested some important considerations respecting the influence of works of agricultural drainage upon rainfall, water-supply, and climate. This paper was devoted to the relations of rainfall to civilised life, and in its course he showed how works of agricultural drainage, by facilitating the rapid flowing away of the rainfall, affected the distribution of rain, the water-supply of a district, and otherwise modified some of the more important conditions of local climates. The question is one which has hitherto, perhaps, received too little consideration in this country. In certain parts of the Continent, where like results have been brought about by extensive denudation of forest lands, these have been too marked and often disastrous in their consequences not to have arrested attention. But a series of results, similar in nature, but less marked in development, following upon the slowly progressive changes brought about by agricultural drainage, have less occupied the attention, although it is to be inferred that in the end they may be not less mischievous in certain directions. But that these mischievous effects may be obviated without detriment to agriculture is highly probable, if the sources of them are once clearly understood.

PROFESSION OR TRADE.

To the Editor of THE LANCET.

SIR,—You will forgive me for supposing that you profess yourself to be the champion of high professional attainments and social status. If so, will you be so kind as to explain satisfactorily why the London Post-office Directory classes the members of the medical profession among the trades? This is not an idle query, because the other day, having been absent some years from England, I wanted to find two or three old friends resident in London. I confess I did not know to what part of the Directory to turn. At last I found my friends in "trade." I did think the medical profession was "one of the three professions"; but since so accurate a volume as the London Post-office Directory classes physicians and surgeons as tradesmen, for the future I must alter my estimate of their social status.

I am, Sir, yours truly,

Feb. 20th, 1877. TRADESMAN.

"A SHIPWRECKED SAILOR."

THE terrible sufferings of our shipwrecked sailors are unfortunately so common that we too often read them with scarcely a thought of wonder or sympathy; but the story of the solitary survivor of the barque *Maria*, of Belfast, is so appalling that it must arrest and dismay the most casual newspaper reader. This vessel left Doboy, Georgia, in November last for Dublin, with a cargo of timber, and soon encountered one of the fearful storms which have caused so many disasters to our shipping during the past winter. Before any aid could reach the crew, the food on board was exhausted, and twelve of them had died. As each in succession perished from starvation, his throat was cut by the survivors, who drank his blood, and then, having broken open his skull, devoured his brains. The bodies were thrown overboard. Two of the crew only survived to be rescued by an American vessel on the 9th of January, and of these, one, the boatswain, died four hours afterwards. The solitary survivor, a youth named M'Linden, was covered with boils, and his body was so swollen that his clothes had to be cut off. He was taken to Goree, on the West Coast of Africa, thence he went to Madeira, and, embarking on board the steamer *Gambia*, reached Liverpool on Saturday night last. This surpasses in horror any story of cannibalism in the struggle for dear life which we ever remember to have read. By the side of such an experience, the tragedies depicted by a recent American novelist as the delusive ramblings of a lunatic, who was "snowed up in the cars" on the prairies, seem small, and fiction less horrible than the truth may sometimes be.

Mr. Dolan.—We are afraid we cannot comply with our correspondent's request.

PORTABLE URINE TESTS.

To the Editor of THE LANCET.

SIR,—I am quite aware that my suggestions on this subject have received as much notice at your hands as I could reasonably expect. There are, however, one or two points in the letter by Dr. Cavafy, published in your issue of to-day, which I feel bound to notice. After the description of a box for this purpose, which he has had made by Hawksley, Dr. Cavafy says, "I have adopted Mr. Kesteven's suggestion of a glass slip, with the addition of a shallow cell," &c. Dr. Cavafy has here made a mistake. I never did suggest a glass slip, for the very reason which he points out as a drawback—viz., the cracking of the glass under the application of heat. What I did suggest was the use of a "thin glass microscopical cover," such as that used for covering microscopical objects. This will not crack when held over the flame of a candle. In proof of the above assertion, I beg to refer Dr. Cavafy to my letter making the suggestion in THE LANCET of Dec. 16th, 1876.

With regard to the tests used by Dr. Cavafy. The presence of sugar in the urine is in so many cases difficult to demonstrate by any process except that of fermentation that, if suspected, it is best in all cases for the medical man to do the testing at home.

With regard to the ferrocyanide and acetic acid test for albumen, Dr. Odling, in his Practical Chemistry, says: "The mere addition of acetic acid to urine occasionally produces a precipitation of mucus, in which case the acidulated urine must be filtered before being tested with the ferrocyanide." This fact, it is obvious, very much impairs the utility of this test for clinical purposes—at all events with apparatus such as recommended by Dr. Cavafy and myself.

With regard to the unsatisfactory results given in the case of certain forms of albumen when tested with nitric acid, the appearance of these modifications of albumen is, if they exist at all, so very rare as practically to render their detection a matter of small necessity. Nitric acid applied either to the cold or hot urine well demonstrates the existence of any form of albumen which requires notice at the hands of the medical man.

Messrs. Arnold, more correctly adopting my suggestions, have made and sent me as a specimen a small case, which contains some thin covers, a dipping tube, and some capillary tubes for nitric acid. The length of this case is three inches, its width one and a quarter inches, and its thickness one-third of an inch. For clinical work this is amply sufficient, and decidedly portable. I, however, quite agree with Dr. Cavafy that such methods should never supersede the more detailed and accurate examinations, which can be made by the medical man at his own house.

I am, Sir, your obedient servant,

Tufnell-park, Holloway, Feb. 24th, 1877. W. HENRY KESTEVEN.

Mr. Jones.—It is stated that there are upwards of 300 candidates who have entered their names for the Preliminary or Arts examination for the diplomas of Fellowship and Membership of the College of Surgeons, which will take place in March instead of June, as heretofore.

W. H. W. T.—Diseases of Women: Barnes. Diseases of Children: West and Holmes.

A NEW FORM OF BI-AURAL STETHOSCOPE.

To the Editor of THE LANCET.

SIR,—A short time since I had a new form of bi-aural stethoscope made, which is a modification of a foreign instrument. I believe there are none of the kind made in England. It consists of a cup-shaped ebony chest-piece, with two small holes, in which are fixed perforated pegs; these are connected to two ear-pieces by means of two pieces of india-rubber about twelve inches in length. I have used the instrument for several weeks, and can speak very satisfactorily of it. When compared with the ordinary bi-aural stethoscope, it is far more simple and portable, can be carried in the vest-pocket, much cheaper, and ought not to cost more than one-half. The one I am using did not cost 5s. It is less likely to get out of order, and lasts longer. If the ear-pieces are made of the same shape as the external auditory meatus—that is, oval, with the long diameter vertical,—they do not require anything to keep them in position.

I have also designed a double bi-aural stethoscope which might be used with much advantage in clinical teaching, as teacher and student could both hear the same sounds at the same time, with ease and comfort to themselves and the patient. The instrument consists of one chest-piece and four ear-pieces.

Yours &c.,

JOHN BROWN.

Western Ophthalmic Hospital, Marylebone-road, Feb. 1877.

JOHN HUNTER.

AT a sale of engravings at the Messrs. Christie's a few days ago, a proof impression of the superb engraving by Sharp, from Sir Joshua Reynolds's painting, fetched £5 10s.; and the companion engraving of Abernethy by Bramley, after Sir T. Lawrence, £2 4s. Many of our readers may be glad to know that the Messrs. Sotheby will dispose by auction on the 7th inst. of the collection of autographs formed by a nobleman, amongst which are three interesting letters of John Hunter to his friend Edward Jenner, on the subject of hydatids, doubting the efficacy of the oil of turpentine as "having any merit in bringing them away"; in another he urges Jenner to pursue his experiments upon the hedgehog, and to send him a colony of them. In the same sale are three letters of Jenner to his son respecting vaccination, and mention of his fixed and unalterable opinion of the deleterious effects of wine on the human constitution, &c.

Dr. Robert Hamilton, (Liverpool.)—Very soon.

UHLER'S MODE OF DETECTING LEAD OR IRON BULLETS IN GUNSHOT WOUNDS.

To the Editor of THE LANCET.

SIR,—Just before seeing in THE LANCET of Sept. 30th, 1876, a notice of Uhler's mode of detecting by chemical tests the existence of bullets in situations difficult or dangerous to explore, I had a case under my charge of a Japanese who had been hit in two places, in one of which, near the spines of the lower dorsal vertebræ no bullet could be reached by legitimate probing. As the course of the wound, which was somewhat peculiar, rendered it just possible that the ball might have escaped, I allowed the wound to heal without further exploration. On reading your notice, however, which I saw a short time afterwards, it seemed likely that the method applied by Uhler would have been useful. I accordingly experimented with lead bullets packed among flesh and splintered bone, imitating as nearly as I could the conditions which would have rendered much probing in the living subject a questionable proceeding, especially when after all there might be no bullet there. The results in all cases were extremely satisfactory, and seemed to me to demonstrate the practical value of the method. I injected first the dilute nitric acid of the B.P., half strength, allowed it to remain in the wound for five minutes (Uhler suggests that the wound should first be washed out—a good precaution), withdrew it by means of a clean glass syringe without any metal fittings, and added the iodide-of-potash solution, which in all cases at once threw down a copious canary-yellow precipitate. Thinking that perhaps even a solution so well diluted as that might be unnecessarily irritating, several additional experiments were tried, which demonstrated that even one part of dilute nitric acid to two or even three hundred of water could be depended on for quite definite results. The experiments were shown to some Japanese students, who were highly charmed with the simplicity and beauty of the method, and a notice was at once sent to the (native) *Military Gazette* (a recent number of which I enclose, containing an article on Telegraph Splints, which led to their being tried in the army here about two months after they were proposed in the medical literature of Europe. Such is the age we live in!). Uhler's method might be readily applied in cases of other foreign bodies of a metallic nature besides bullets, as, for example, a needle.

Hoping these remarks may help in leading to the adoption of a method so simple and so safe, I am, Sir, your obedient servant,

HENRY FAULDS, L.F.P.S.G.

Tsukiji Hospital, Yeddo, Japan, Nov. 23rd, 1876.

J. G. H.—We should say it is not usual, and certainly it is perfectly unreasonable, to ask house-surgeons to sign any such bond.

J. C. O. W.—Yes.

A SUBJECT FOR THE MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—I beg to draw your attention to what I have long considered a very important reform necessary to be made in reference to the appointing of medical officers to all classes of charities, whether supported by voluntary contributions or under the control or support of Government—viz., that instead of the candidate being restricted (as unfortunately we are too often in the habit of observing in your valuable journal) to the diploma of Member or Fellow of the Royal College of Surgeons of England, or Member or Fellow of the Royal College of Physicians of London, we would respectfully ask why such offices should be given in preference to the foregoing licensing bodies, to the absolute exclusion of Members or Fellows of the Royal Colleges of Surgeons of Ireland and Scotland, and their corresponding licensing bodies in Physic, more especially in such a metropolis as London, where the community are made up of all sects and denominations, and as all the licensing bodies in the kingdom are equally recognised and represented by the General Medical Council? Why should we not all be recognised on the same footing, and a physician and surgeon of Ireland and Scotland have as much right to competition in such cases as our equally esteemed English *confrères*? I should consider the reform a very necessary one, and well worth the notice of the General Medical Council at their next meeting.

Your obedient servant,

Tavistock-street, Bedford-square, Feb. 1877. J. H. HARRIS.

*** It is necessary for some appointments that a certain class of candidate should be secured, and, whilst examining bodies vary so much in their requirements, this can only be done by insisting on the possession of certain diplomas. No doubt, as soon as the various medical corporations can agree to a conjoint scheme for each division of the kingdom, the anomaly of such restrictions will speedily disappear.—ED. L.

CAUTERIES.

To the Editor of THE LANCET.

SIR,—In your journal of Feb. 10th, 1877, p. 194, Mr. S. W. Iorwerth Joseph, in describing Dr. Paquelin's cautery, says, "The accompanying diagrams illustrate the additional appliances made for Mr. Reeves and Dr. Heywood Smith by Mayer and Meltzer." Permit us to say that at the suggestion and with the assistance of Mr. A. E. Durham, of Brook-street, we constructed No. 1 cautery, and after seeing this we got instructions from Mr. Reeves and Dr. Heywood Smith to make the others.—Yours obediently,

Feb. 28th, 1877. MAYER AND MELTZER.

SALICYLIC ACID AND SALICIN IN RHEUMATISM.

IN the *Boston Medical and Surgical Journal* for Feb. 8th will be found an analysis of 109 cases of rheumatism treated with salicylic acid and salicin. The cases are not selected, but represent all the patients with rheumatism who entered the Boston Hospital since February, 1876, at which date the new treatment was first adopted. The great majority of the cases did well, the results contrasting most favourably with the previous treatment by alkalies. Nausea and vomiting were observed in 20 cases where the acid was given, while headache and deafness were not uncommon. On the other hand, salicin was better tolerated, and the few who took it throughout their illness "had excellent appetites, and made a rapid and thorough convalescence, instead of being left in a generally poor condition with no appetite, as was too often the case with those treated with salicylic acid.

Dr. Herbert Major.—We will publish it at an early date.

VACCINATION AND REVACCINATION.

To the Editor of THE LANCET.

SIR,—I have had occasion during the past month to revaccinate some scores of adults, to whom time was of value, and whose engagements rendered the performance of the simple operation, to many a matter of grave consideration, and in some instances to be delayed, if not altogether evaded, the excuse being they could not afford to lose much time either for the operation or during the subsequent course of its results. I was much perplexed in several instances to find some method to overcome the above objections as to the hindrance of the persons revaccinated, who called upon me for that purpose while *en route* to some distant place of engagement, and at the same time to preserve the recently applied lymph from the friction of the undershirt-sleeve, which all were too ready to pull down over the just punctured arm as soon as possible, and then to hurry on to their destinations. After trying, with questionable success, various contrivances to overcome these apparently trifling obstacles to the success of the operation of revaccination in very many instances, my assistant, Mr. J. Wheeler, suggested the use of a circular pad of white felt, the centre of which had been punched cleanly out, so as to leave uncovered the spot on the arm punctured by the lancet for the introduction of the lymph; the circular pad being retained *in situ* upon the arm by some adhesive material applied to its surface that came next to the skin. The ordinary white felt corn-plasters were first employed for the purpose mentioned, with marked advantage in rendering the result of the operation more satisfactory than formerly was the case, owing frequently to the removal of the recently applied lymph, or to the destruction of the early-formed vesicle by the close fitting and rough sleeve of the undershirt, or from other causes due to the patient's occupation or forgetfulness. Owing to the above-named plasters after a trial being found too small for the purpose designed—the protection of the forming and the fully-formed vaccine vesicle,—the largest white felt bunion-plaster, about an inch square and a quarter of an inch thick, was selected, the central orifice of which was enlarged, and was applied with the most gratifying result, the increase in both the area and thickness of the shield being a great gain, and entirely defended the punctures and forming vesicles from compression, friction, or other injury; while by means of fine cotton-wool or other dressing being placed in the punched-out space of the plaster, the discharged lymph became absorbed, and the sores so treated were in every way a source of comfort to the patient, and left well-formed cicatrices. In no case out of the many I have thus treated as above detailed have I met with any disagreeable after-effects, while the average in the rate of success over failure in revaccinating has decidedly been increased. I therefore think the plan proposed deserving of a more extended application.

In the revaccination of women the use of the above-mentioned felt shields is less required, owing to the difference existing in their dress; but should they be employed they will be found to be not only useful, but a source of comfort, in spite of the exception taken to them by some, due to the prominence of the plaster shields, rendering for some time at least the operation more visible; but this surely is a mere matter of opinion, and barely deserving a moment's consideration when we regard the comfort and security which the proceeding advocated secures in the furtherance of the success of the operation now so much in vogue.

Permit me, in conclusion, to commend the practice of diluting the vaccine lymph with pure glycerine, especially so in the proportion of one drop of the former to three or four well-filled tubes of the latter. This proceeding economises the lymph, and especially is this the case where several patients at a time are to be revaccinated, the lymph remaining fluid to the last. The presence of the glycerine appears to excite a slight amount of useful irritation in the punctures, and so promotes the successful absorption of the lymph.

I remain, Sir, yours &c.,

Jermyn-street, St. James's, Feb. 26th, 1877. FREDERICK HALL.

To the Editor of THE LANCET.

SIR,—In this day's LANCET Dr. Pollock gives it as his opinion that so long as one "is liable to be affected by vaccination, so long is he liable to small-pox." In an annotation headed "Revaccination," in your issue of Feb. 17th, some evidence supporting a completely opposite view is given, and there is abundant other evidence to show that the local phenomena of vaccination afford no information as to the liability to small-pox.

On the question of revaccination Dr. Pollock thinks "we may advise those who did not take last time that they are efficiently vaccinated, and recommend those who did take to be done again." Many men would certainly prefer to give exactly the opposite advice, especially to a person who had never been successfully revaccinated. Just now we are sometimes asked to revaccinate persons, on whom the operation was unsuccessfully attempted in 1870 or 1871, under circumstances which leave no doubt that these persons were then insusceptible. They take well now. Should we have been justified in advising them not to be done because they did not take in 1870? Some practitioners adopt this rule: They advise those who have not been revaccinated to be done, and those whose revaccination was unsuccessful to submit to another trial. Those who have been once successfully revaccinated they recommend to be done only in cases of special exposure to infection.

Your obedient servant,

Brixton, Feb. 24th, 1877. JAMES B. BALL, M.D.

RICHMOND WATER-SUPPLY.

EXTENSIVE improvements to the Richmond water-supply have been effected in the course of the last few weeks. The whole of the vestry's mains, extending over a distance of more than fourteen miles, have been successfully laid, over 2000 fresh connexions with houses have been completed, and there is now an average daily supply exceeding twenty gallons of water per head. It would seem that an enormous waste, owing to defective fittings, has been going on in the district, and the inhabitants are now earnestly urged by the vestry to take means to prevent such waste in future. While the vestry is showing itself so solicitous for the comfort and convenience of the ratepayers, it is the bounden duty of the latter to afford a hearty co-operation with the efforts of their representatives for the general good.

Mr. Salter.—We really cannot advise on hair-dyes.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—With reference to a letter signed "Fair Play," in your number of Feb. 17th, I never stated that exchanges were absolutely prohibited. "The almost absolute prohibition of exchanges" is the expression used. Considering that promotion is now guaranteed at twelve years, allowing exchanges could not interfere with the promotion from surgeon to surgeon-major; and as to the step from the latter rank to the administrative grade, it might easily be ruled that no one could be so promoted who had not put in (say) ten years abroad, and exchanges allowed. The fact is that exchanges are allowed freely in other branches of the army, and so in justice ought to be allowed to the officers of the army medical department. Men entered the service under the idea that a privilege allowed to all officers would not subsequently be disallowed to them. You cannot take away a privilege from one set of officers and allow it to others without injustice. Some people seem to have an erroneous idea that the exchange of two officers is unfair to other officers who do not exchange. This is nonsense. Suppose the letters of the alphabet to represent the officers of the army medical department on home service, A being the first for foreign service, Z the last home. Suppose B changes places with Y, A and C are exactly in the same position as before, and so are X and Z. Everyone's place in the roster is just the same as before, except Y, who, from being the second last to go abroad, becomes the second to go out; and B, who, from being the second to go out, becomes the second last for foreign service. They both exchange willingly, and hurt no one else, and for anyone else to grumble is their dog-in-the-mangerism. I have sometimes thought that promotion would be accelerated and grumbling prevented if all men were promoted by seniority to the administrative grade, and in them, but not necessarily employed, being placed or not on half-pay (which might count for seniority and retirement), according as to whether an appointment was vacant or not. Each deputy surgeon-general being employed once for five years, and then placed on half-pay till he came to the top of the list, then promoted surgeon-general, but only employed once, if at all, and allowed to run up the list in the same way.

Yours faithfully,

Feb. 19th, 1877. M.D.

ROYAL BARRACKS, DUBLIN.

A CORRESPONDENT of the *Irish Times* is able to state that the Royal Barracks, Dublin, respecting the alleged insanitary condition of which a good deal of discussion ensued some time back, are about to undergo a thorough overhauling at the hands of the Engineers' department. The work, which will comprise the relaying of the drains of the buildings, will, it is thought, commence some time this month, and is expected to last for two months. The troops now stationed in the barracks are to be drafted elsewhere during that time.

M.A., M.B.—Sir William Jenner's book on Diphtheria has been for long out of print. His lecture on Croup appeared in THE LANCET for Jan. 2nd and 10th, 1875.

EXTERNAL APPLICATION OF BELLADONNA.

To the Editor of THE LANCET.

SIR,—Hearing that there recently appeared in one of the medical journals a case of poisoning by external application of belladonna, and having myself had an alarming lesson in reference to its use in urethral stricture, my experience may prove useful to some of our younger *confrères*.

A few years ago I had under my care an elderly gentleman with severe stricture and perineal fistulæ. The irritability of the urethra was at times so great as to prevent the introduction of any instrument. I tried extract of belladonna smeared on the bougie without success; and on one occasion, when there was great spasm with retention, requiring prompt use of the catheter, as warm baths &c. had failed, I rubbed up a few grains of the extract with glycerine, and injected about thirty drops by means of a small syringe into the urethra, a drop or two oozing from the fistulæ. To my horror, in less than five minutes the patient became as red as a lobster, and quickly sank into a state of unconsciousness, with muttering delirium. This happened in a country house far from all assistance; but fortunately the inhabitants were in the habit of drinking strong coffee, and the freshly roasted berry is to be found in every house; so I set the cook to work at making "café noir." Taking great care to prevent suffocation in the unconscious state of the patient, giving a little at a time, I managed to make him swallow twelve small cups of the strongest coffee, and in less than an hour had the satisfaction of seeing him recover from a state which seemed hopeless.

It is generally understood that there is no danger of absorption by the mucous membrane of the bladder. Whether this holds good for the urethra I cannot say; but in this case it is likely that absorption took place by the lining membrane of the fistulæ, which, as they were of long standing, must have been of the nature of mucous membrane.

Yours faithfully,

Porchester-terrace, Hyde-park, Feb. 1877. J. W. GILLESPIE, M.D.

M. PASTEUR AND DR. BASTIAN.

THE controversy between M. Pasteur and Dr. Bastian as to the facts of their experiments is to be referred to a sort of arbitration. M. Pasteur has challenged Dr. Bastian to this course, and the challenge has been accepted. A Commission is to report on M. Pasteur's experiments at Paris, and the President of the Académie des Sciences has nominated for this purpose MM. Milne Edwards, Dumas, and Boussingault. Dr. Bastian was to apply to the Royal Society for a similar Commission to report on his experiments.

Radius has omitted to enclose his card.

"SMALL-POX FROM THE LAUNDRY."

To the Editor of THE LANCET.

SIR,—In reading the article under this heading in your issue of to-day, the question that naturally suggests itself is, How did the girl get the disease? Was it by means of linen or other goods sent to the wash in an infected state? And if so, is it not doubly hard that the poor laundry-woman should suffer for what is really the culpable negligence of others? Judging from my own experience, I should say that the public are by no means sufficiently aware of the responsibility they incur by sending linen &c. to the wash from the sick-room of a person suffering from small-pox or scarlet fever without previous disinfection. I am equally satisfied that the proprietors of laundries are ignorant of the danger to themselves and the public that may arise from carelessness in this respect. Only last year a public laundry was established in this neighbourhood, and in the advertisements that appeared at the time it was announced that special provision was made for disinfection. The managers, therefore, were actually holding out to the public an inducement to send infected linen to their establishment! I pointed out this anomalous position to them, and took occasion at the time to draw up a circular of "Instructions to Householders as to the disposal of Infected Linen &c. during the progress of an Infectious Disease." All the laundry proprietors were furnished with a supply of them, with a request to distribute them among their customers. This request has been very generally complied with, and my medical friends have also rendered valuable assistance by distributing them in every case of infectious disease coming under their care.

I have ventured to make this communication, as the subject of your article seems to me to touch on a question of very wide interest.

I am, Sir, your obedient servant,

EDWARD SHATON, M.D.,

Feb. 24th, 1877. Medical Officer of Health, Nottingham.

TRACHEOTOMY TUBES.

To the Editor of THE LANCET.

SIR,—Having for some years made tracheotomy tubes a special study, allow me to make a few remarks upon the one mentioned in your journal of the 3rd and 17th inst.

The plan of using the same wings or outer tube for the three different sizes was introduced into England from New York some years ago; but the ingenious shield represented in THE LANCET of the 3rd inst., made by Messrs. Krohne and Sesemann, is a great improvement upon the New York shield. The chief defect of the tube, however, still remains, and will, I think, defy remedy. It is simply that the same length of tube and curve has to do for a child as well as for an adult; and were the tube made longer, according to its calibre, it could only be at the lower end, and not in the neck or near the shield where required. Therefore these tubes will be found to be absurdly long for most children under ten years of age, and far too short for most adults.

Yours truly,

St. Thomas's-street, Borough, Feb. 19th, 1877. J. MILLIKIN.

NITRITE OF AMYL.

To the Editor of THE LANCET.

SIR,—The increasing appreciation of the value of this agent renders its safe administration in the emergencies for which it is required a matter of great importance, seeing that the vapour of five minims may save life, and that of twenty destroy it. To ensure the instantaneous use of a safe dose, it has been suggested to have a few minims sealed up in a glass capsule, which can be readily broken when wanted. The extreme volatility of the fluid has presented a little difficulty in carrying out the suggestion; but this has been overcome, and we are now able to offer capsules to the members of the medical profession, containing about four minims each. They are sold in boxes, each containing six.

Yours &c.,

ALLEN AND HANBURYS.

Plough-court, Lombard-street, Feb. 1st, 1877.

PHYSIOLOGICAL ACTION OF SANTONIN.

To the Editor of THE LANCET.

SIR,—In addition to the remarks already made in your journal about the physiological action of santonin, allow me to mention the following case.

I gave lately four grains of santonin to a slightly-made, pale-faced girl, aged eighteen, who is very much annoyed with worms. She told me that in about twenty or thirty minutes after taking the medicine she was seized with giddiness, intense headache, and every object appeared to her of a bright-green colour. She was obliged to go to bed. This state of matters continued all night; for in the morning when she got up she still had the headache and the colour-blindness. These untoward symptoms gradually wore off, and in half an hour they were quite gone.

I am, Sir, yours &c.,

Edinburgh, Feb. 10th, 1877. C. CUTHBERT, M.D., &c.

SPRAY PRODUCERS.

To the Editor of THE LANCET.

SIR,—Will any of your readers who have been in the habit of using "Siegle's steam spray producer" kindly give me information as to the quantity of such drugs as hydrocyanic acid, carbolic acid, iodine, &c., that might be used for each spraying?

Yours faithfully,

Feb. 26th, 1877. RADIUS.

"A HINT WANTED."

IN reply to a query under this heading, put by "General Practitioner" in our last issue, Dr. Forsyth, of Greenwich, suggests that the perforating ulcer should be converted into an open one, and thus enabled to contract and heal rapidly. Another correspondent, signing himself "Chirurgeon," suggests that probably the ulcer would heal if touched twice daily with solid sulphate of copper. He would, however, recommend the patient to be put on five-grain doses of the iodide of potassium, gradually increasing the dose to fifteen or twenty grains twice daily, in addition to the local treatment, although there may be no signs of any specific taint.

"A NEW ETHER INHALER."

To the Editor of THE LANCET.

SIR,—In your issue of Feb. 17th appears a letter from Dr. Frank Thorpe Porter respecting a new ether inhaler that I have lately introduced to the notice of the profession, made by Messrs. Coxeter and Son, Grafton-street East, London. Permit me, in reply, to make a few observations, as I am at a loss to understand on what grounds Dr. Porter comes forward to give an opinion on a subject of which by his letter he must have a very vague idea. Without entering farther into a controversy with Dr. Porter as to the relative advantages of my ether inhaler and others, it may avoid misconception if I suggest that the opinions of a gentleman who states that "the period required to produce anæsthesia is not influenced by the form of an inhaler" must be accepted with reserve; while his views respecting the efficiency of my own adaptation may be regarded with still less interest when it is known that he has never seen it in its complete form, and only once (used by myself) in its probationary stage.

As Dr. Porter holds no hospital appointment of any kind, his experience on the subject can hardly be large enough to enable him to decide the respective advantages of inhalers *ex cathedra*.

I am, Sir, yours truly,
LAMBERT H. ORMSBY, F.R.C.S.,
Surgeon to the Meath Hospital.

Lower Fitzwilliam-street, Dublin, Feb. 20th, 1877.

GALVANOMETERS.

To the Editor of THE LANCET.

SIR,—In THE LANCET for Feb. 10th, 1877, Mr. Dixon Mann recommends the use of a galvanometer in order to estimate the dose of electricity administered to a patient. Will Mr. Mann kindly inform me as to the price of such an instrument, and where a good one can be obtained?

Yours very truly,
M.B.

Brighton, Feb. 20th, 1877.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Broadbent, London; Prof. Macleod, Glasgow; Mr. Ashburner, Horsham; Mr. Cane, London; Mr. Birmingham, New York; Mr. Probyn, Bury St. Edmunds; Dr. Rommelaire, Brussels; Mr. Kamal, Bombay; Dr. Will, Aberdeen; Dr. Peele, Dublin; Mr. Camden, Rhyl; Dr. Gill, Bow; Mr. Jones, London; Dr. Seaton, Nottingham; Dr. Edis, London; Mr. Hall, London; Mr. Tyndall, London; Mr. Farafield, Brixton; Mr. Bevers, Oxford; Mr. Brinckman, London; Mr. Roberts, Bradford; Dr. Elliott, London; Dr. Craddock, Shepton Mallet; Mr. Reynolds, Brixton; Dr. Wharton, Bedford; Mr. Hamilton, Liverpool; Messrs. Nurden and Peacock, London; Dr. Major, Wakefield; Mr. Marriott, London; Mr. Foster, Edinburgh; Mr. Harris, London; Mr. Barnes, London; Dr. Stocker, London; Dr. Jaakson, Birmingham; Mr. Clayton; Messrs. Mayer and Meltzer, London; Mr. Reeves; Mr. Wilson; Mr. Gravely, Newick; Dr. Williams, Croydon; Dr. C. James, Paris; Dr. Heath, Stirling; Dr. Holmes, Leeds; Dr. Gascoyne; Dr. Forsyth, Greenwich; Mr. Mason; Dr. Maginnis, Honiton; Dr. Marley; Dr. Brown, Hastings; Dr. Clutton; Mr. Daniell; Mr. Long; Mr. Anvil; Mr. Simmons; Mr. Dixon; Mr. Sheard, Margate; Mr. Wood; Mr. Binks; Mr. Salter; Dr. Garron; Dr. Tomkins, Manchester; Dr. Gilland, Wallingford; Mr. Osborn; Mr. Wilson, Clay Cross; Mr. Rutter; Dr. Gresham, Bromley; Mr. Sheppard; Dr. Reynolds; Dr. Sturges; Mrs. Hall; Dr. Ash, Holsworthy; The Director-General of the Army Medical Department; Inquirens; Selim; Apyretic; Radius; M.A., M.B.; A Country Reader: A Puzzled Patient; J. L.; X. Y. Z.; The Hon. Sec., Hospital for Diseases of the Throat; M. W. W.; Surgeon; Country Practitioner; Excelsior; The Registrar-General; Chirurgeon; Why; An Irish Qualified Assistant; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Robertson, Glasgow; Mr. Bush, Nottingham; Messrs. Lee and Nightingale, Liverpool; Mr. Sampson, York; Mr. Force, Exeter; Mr. Lamb, Albrighton; Mr. Iles, Fairford; Mr. Mason, Apsley Guise; Mr. Goddard, Leicester; Messrs. Harrold and Hinckley; Mr. Dolan, Halifax; Dr. Clark; Mr. Cole, Liverpool; Mr. Elliott; Mr. Worsfold, Dover; Dr. Redmond, Gateshead; Mr. Wingate, Streatham; Mr. Best; Dr. Dorling, Sutton; Dr. Simpson; Dr. Lumsden; Mr. Morgan; Mr. Richardson; Mr. Young: Dr. Winlard, Sheffield; Mr. Roberts, Festiniog; Mr. Somerville; Mr. Parkinson, Melbourne: Mr. Jeffreys, Chesterfield; Prof. Caird, Glasgow; Dr. March, Bradford; Medicus, Edinburgh; Vanguard; Medicus, Callington; Alpha, Hanley; Medicus, Manchester; A. B. A.; M.D., Newcastle; M. B.; S. D., Keighley; B. T. C.; M. R. J.; House-Surgeon; Chirurgus; A. R. P., Tutbury; Alter, St. Helens.

Birmingham Daily Mail, Sanitary Journal for Scotland, Newcastle Daily Chronicle, Manchester Guardian, Liverpool Daily Post, Leeds Mercury, Metropolitan, East London Observer, Tatler, Weston-super-Mare Gazette, Surrey Advertiser, Worcester Chronicle, Northern Echo, Record, Scotsman, Pictorial World, Sussex Daily Post, Carlisle Express, West Middlesex Chronicle, Rock, Women's Suffrage Journal, Manchester Courier, Malton Gazette, and *South Wales Daily News* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, MARCH 1st, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall	Remarks at 8 A.M.
Feb. 23	29·94	N N E	35	37	...	45	35	0·12	Cloudy
„ 24	29·73	W N W	42	44	...	52	36	0·06	Raining
„ 25	29·41	N.	47	50	...	54	42	0·02	Cloudy
„ 26	29·18	N.W.	41	45	...	45	40	0·05	Bright
„ 27	29·81	W.	34	36	...	41	32	0·09	Bright
„ 28	30·18	N.W.	...	30	...	46	26	...	Bright
Mar. 1	30·32	W.	...	29	...	...	25	...	Bright

Medical Diary for the ensuing Week.

Monday, March 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. W. K. Parker, "On the Osteology of Birds."
MEDICAL SOCIETY OF LONDON.—7½ P.M. General Meeting for the Election of Officers and Council.—8½ P.M. Dr. Edmunds, "On Questions suggested by Vegetarianism, with Personal Evidence by Vegetarians."

Tuesday, March 6.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be exhibited:—Chronic Interstitial Pneumonia associated with Hæmorrhage into the Supra-renal Capsules; The Organisms characteristic of Vaccinia and Variola; Fibroid Changes in the Spinal Cord and its Vessels associated with Chronic Bright's Disease, with Contracted Kidney (Arterio-capillary Fibrosis). — Microscopical Specimens and Drawings will be arranged for inspection at 8 P.M.

Wednesday, March 7.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. W. K. Parker, "On the Osteology of Birds."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. J. Braxton Hicks, "On the Difference between the Sexes in relation to the Aspect and Treatment of Diseases."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens.—Dr. Edis: "The Forceps in Modern Midwifery."—Dr. Playfair, "On Fibroid Tumour complicating Pregnancy."—And other communications.
MEDICAL SOCIETY OF LONDON.—Anniversary.

Thursday, March 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, March 9.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. W. H. Flower, "On the Comparative Anatomy of Man."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. J. Braxton Hicks, "On the Differences between the Sexes in relation to the Aspect and Treatment of Diseases."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Godlee, "On three Cases of Gas in the Peritoneal Cavity."—Dr. Burney Yeo, "On a Case of Exophthalmic Goitre, with new Phenomena" (a living subject).—Mr. Lowne, "On a Case of Retinitis, with Observations on the Perception of Colour."

Saturday, March 10.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under ..... £0 4 6 | For half a page £2 12 3
For every additional line ... 0 0 6 | For a page 5 0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.